

SECTION 2.0

PRECIPITATION

2.0 PRECIPITATION

2.1 Overview

The Public Facilities and Resources Department (PFRD) maintain records for 163 recording/non-recording precipitation stations in and adjacent to Orange County. Station locations are shown in **Figures 1 and 2**. Of these, 43 are active precipitation stations; 14 of which are operated and maintained by PFRD. The remaining stations are operated and maintained through the Department's cooperative observer program. Station names, type of raingage, period of record and observer are listed in **Tables 1 and 2**. The longest period of record for an active precipitation station is Tustin-Irvine Ranch (Station #61) which dates back to 1898.

In addition to the recording/non-recording rainfall stations, PFRD operates and maintains the ALERT (Automated Local Evaluation in Real Time) flood detection system. The ALERT precipitation network consists of 67 rain and snow gages located throughout Orange County and surrounding areas described in **Table 3**. A map which shows the location of the ALERT rainfall stations is shown in **Figure 3**.

The ALERT system is an automated, real-time radio reporting flood detection system. Each ALERT precipitation gage is a modular, self contained, event recording unit which transmits rainfall in real time to the base station computer located at the Katella Facility. During storm events, a tipping bucket mechanism records each 1mm (.03937 inches) of rainfall which causes the electronics and radio package to transmit a station identification and precipitation value to the base station computer. The precipitation value is stored as an accumulated total. At stations equipped with both standard and ALERT raingages, the readings from the standard gages are used to verify the records produced by ALERT.

Components of the ALERT system are presented in **Figure 4**.

2.2 2001-2002 Data Presentation

Precipitation summaries for 18 selected stations and a map showing respective station locations are shown in **Table 4 and Figure 5**. Stations were selected to give a representative picture of the rainfall occurring throughout Orange County during the 2001-2002. Tables **5-22** provide a summary of daily and monthly total rainfalls.

Total season precipitation values for the stations ranged from 28 to 40 % of the long term averages. Annual precipitation totals for selected stations in Orange County varied from 3.55 inches at Newport Beach to 11.24 inches at Santiago Peak. The Santa Ana precipitation station (Station 121) recorded an annual rainfall total of 3.82 inches which is 9.19 inches less than the long term average.

Short and long duration rainfall intensities and their return frequencies for 20 precipitation stations are listed in **Tables 23 and 24**. Station locations are presented in **Figure 6**.

A graph which shows the flood years and annual rainfall totals recorded at the Santa Ana Station (Station 121) for the period 1909-2002 is presented in **Figure 7**.

Equal lines of precipitation for the 2001-02 season and 40-year mean are presented in the isohyetal maps shown in **Figures 8 and 9**.

Table 1
HISTORICAL PRECIPITATION STATIONS

| Sta. No. | Station Name | Equip Type | North Latitude | West Longitude | Elev Feet | Record Begins | Record Ends | Cooperator |
|----------|--------------------------------|------------|----------------|----------------|-----------|---------------|-------------|--------------------------|
| 1 | Seal Beach | S | 33-44-38 | 118-06-43 | 12 | 1928 | 1968 | City of Seal Beach |
| 2 | Los Alamitos Sugar Factory | S | 33-48-30 | 118-04-00 | 20 | 1910 | 1932 | Private Observer |
| 3 | Artesia Fire Station | S | 33-51-48 | 118-04-58 | 52 | 1917 | 1985 | LACDPW |
| 6 | La Habra Citrus Association | NR | 33-55-42 | 117-56-42 | 300 | 1925 | 1956 | Private Observer |
| 19 | Tres Hermanos Ranch | NR | 33-59-30 | 117-48-05 | 975 | 1930 | 1963 | Private Observer |
| 20 | Carbon Canyon Summit | NR | 33-57-58 | 117-45-40 | 1200 | 1930 | 1961 | Private Observer |
| 22 | La Vida Springs | NR | 33-55-48 | 117-47-42 | 858 | 1930 | 1962 | Private Observer |
| 23 | Prado Dam | S | 33-53-24 | 117-38-09 | 575 | 1931 | 1969 | OCPFRD |
| 25 | Yorba Ranch | NR | 33-52-00 | 117-46-00 | 380 | 1927 | 1944 | Private Observer |
| 26 | Yorba Linda | S | 33-53-16 | 117-49-10 | 395 | 1912 | 1982 | Private Observer |
| 27 | Placentia Mutual Orange Assoc | NR | 33-52-04 | 117-52-24 | 225 | 1912 | 1982 | Private Observer |
| 28 | Fullerton Knowlton | S | 33-52-20 | 117-53-45 | 180 | 1919 | 1988 | Private Observer |
| 29 | Anaheim Union Water works | S | 33-51-32 | 117-53-06 | 190 | 1930 | 1969 | Private Observer |
| 30 | Olive - First National Bank | NR | 33-49-53 | 117-54-43 | 230 | 1921 | 1934 | Private Observer |
| 31 | Anaheim - Dicke | NR | 33-50-08 | 117-54-54 | 160 | 1879 | 1921 | Private Observer |
| 33 | Anaheim City Hall | S | 33-50-05 | 117-54-42 | 160 | 1880 | 1992 | City of Anaheim |
| 35 | Anaheim Associated Laborator | NR | 33-50-00 | 117-56-12 | 130 | 1927 | 1947 | Private Observer |
| 36 | Anaheim Substation | S | 33-48-11 | 117-54-05 | 143 | 1923 | 1989 | City of Anaheim |
| 37 | Garden Grove - Allen Ranch | NR | 33-47-06 | 117-56-27 | 100 | 1924 | 1959 | Private Observer |
| 38 | Garden Grove Lumber Co | NR | 33-46-24 | 117-56-30 | 95 | 1914 | 1943 | Private Observer |
| 39 | Stanton - Clark | NR | 33-48-30 | 118-00-06 | 60 | 1926 | 1964 | Private Observer |
| 42 | Talbert | NR | 33-42-06 | 117-56-42 | 40 | 1918 | 1931 | Private Observer |
| 43 | Wintersburg - Slater | NR | 33-42-47 | 117-56-42 | 25 | 1928 | 1971 | Private Observer |
| 45 | Huntington Beach Fire Station | S | 33-39-50 | 117-59-48 | 32 | 1927 | 2001 | City of Huntington Beach |
| 47 | Costa Mesa - Shiffer | NR | 33-40-56 | 117-53-47 | 47 | 1928 | 1968 | Private Observer |
| 48 | Irvine - Coast Ranch | NR | 33-36-10 | 117-53-00 | 50 | 1929 | 1946 | The Irvine Co |
| 49 | Irvine - Morris | NR | 33-33-36 | 117-49-18 | 50 | 1900 | 1945 | Private Observer |
| 50 | El Toro - Moulton Ranch | NR | 33-36-26 | 117-42-08 | 375 | 1877 | 1972 | Private Observer |
| 51 | Irvine - Shady Camp | NR | 33-37-59 | 117-48-16 | 270 | 1903 | 1970 | The Irvine Co |
| 52 | Irvine - Bommer (Old Cattle) | NR | 33-39-48 | 117-49-54 | 80 | 1898 | 1977 | The Irvine Co |
| 53 | Irvine - Hog Ranch | NR | 33-39-50 | 117-52-36 | 60 | 1913 | 1924 | The Irvine Co |
| 54 | Irvine - Harkle Road | NR | 33-41-00 | 117-48-00 | 100 | 1911 | 1970 | The Irvine Co |
| 55 | Irvine - Warehouse | NR | 33-40-00 | 117-45-00 | 200 | 1894 | 1972 | The Irvine Co |
| 56 | Irvine - Baudino Ranch | S | 33-38-56 | 117-42-35 | 355 | 1911 | 1975 | The Irvine Co |
| 57 | Irvine - Lambert Ranch | NR | 33-42-00 | 117-43-00 | 430 | 1927 | 1973 | The Irvine Co |
| 60 | Irvine - San Joaquin Fruit Co | NR | 33-42-56 | 117-46-06 | 198 | 1921 | 1974 | The Irvine Co |
| 62 | Irvine - Alisc | NR | 33-43-00 | 117-44-00 | 90 | 1910 | 1944 | Private Observer |
| 63 | Delhi - Holly Sugar | S | 33-42-33 | 117-51-15 | 65 | 1923 | 1982 | Private Observer |
| 64 | Santa Ana - Hill and Son | NR | 33-45-00 | 117-52-00 | 125 | 1908 | 1941 | Private Observer |
| 65 | Tustin Union High School | S | 33-44-12 | 117-49-06 | 100 | 1924 | 1963 | Private Observer |
| 68 | Santa Ana - Campbell | S | 33-46-24 | 117-50-24 | 210 | 1918 | 1963 | Private Observer |
| 69 | Orange - Armour | S | 33-46-58 | 117-51-03 | 200 | 1895 | 1933 | Private Observer |
| 70 | Villa Park Central Lemon Assoc | NR | 38-48-20 | 117-49-36 | 290 | 1919 | 1959 | Private Observer |
| 71 | El Modena - Hewes Ranch | NR | 33-47-00 | 117-48-30 | 280 | 1918 | 1958 | Private Observer |
| 72 | Irvine - Peters Canyon Dam | NR | 33-46-00 | 117-46-00 | 550 | 1918 | 1958 | Private Observer |

Table 1 - continued

HISTORICAL PRECIPITATION STATIONS

| Sta. No. | Station Name | Equip Type | North Latitude | West Longitude | Elev Feet | Record Begins | Record Ends | Cooperator |
|----------|------------------------------------|------------|----------------|----------------|-----------|---------------|-------------|----------------------|
| 74 | Irvine Ranch Limestone Cyr | S | 33-45-27 | 117-42-30 | 855 | 1918 | 1987 | The Irvine Co |
| 76 | Santiago Canyon - Pleasents Ranch | NR | 33-43-45 | 117-38-54 | 1145 | 1894 | 1933 | Private Observ |
| 77 | Silverado - Holtz | NR | 33-44-42 | 117-38-24 | 1275 | 1919 | 1964 | Private Observ |
| 78 | Silverado - Camp Silverad | S | 33-45-00 | 117-34-00 | 2000 | 1930 | 1962 | Private Observ |
| 81 | Trabuco Canyon - Robinsor | NR | 33-39-12 | 117-34-14 | 1150 | 1926 | 1967 | Private Observ |
| 82 | Bell Canyon - Hare and Starr Ranch | S | 33-38-00 | 117-34-00 | 1250 | 1930 | 1946 | Private Observ |
| 86 | San Juan Capistrano - Hanke | S | 33-30-45 | 117-38-16 | 150 | 1905 | 1977 | Private Observ |
| 89 | Huntington Beach - Union Oil | NR | 33-41-00 | 118-00-00 | 65 | 1925 | 1940 | Private Observ |
| 90 | Brea - Union Oi | NR | 33-55-49 | 117-54-53 | 375 | 1925 | 1966 | Private Observ |
| 91 | Anaheim Carroll Ranch | S | 33-49-54 | 117-57-49 | 105 | 1924 | 1977 | Private Observ |
| 92 | San Juan Substatio | S | 33-30-44 | 117-39-56 | 160 | 1923 | 1976 | Private Observ |
| 93 | Fullerton Pumping Statiot | NR | 33-50-52 | 117-55-34 | 150 | 1931 | 1991 | City of Fullertor |
| 94 | Union Oil, Naranja | NR | 33-55-30 | 117-57-18 | 500 | 1927 | 1940 | Private Observ |
| 95 | G and L Union Oil Pumping Statiot | NR | 33-54-12 | 117-52-12 | 360 | 1927 | 1940 | Private Observ |
| 98 | Puente Hill-Weisel | S | 33-57-08 | 117-55-26 | 625 | 1925 | 1987 | LACDPW |
| 99 | Laguna Beach Lumber Compan | S | 33-23-33 | 117-46-55 | 30 | 1926 | 2001 | Private Observ |
| 103 | Huntington Beach - Murdy Ranch | NR | 33-43-24 | 118-00-42 | 5 | 1925 | 1966 | Private Observ |
| 104 | Trabuco Canyon - Refractor | NR | 33-40-24 | 117-34-48 | 1500 | 1932 | 1941 | Private Observ |
| 106 | Wintersburg - Moore | NR | 33-43-09 | 118-00-21 | 15 | 1922 | 1945 | Private Observ |
| 107 | Huntington Beach - American Suga | NR | 33-44-06 | 118-00-24 | 30 | 1907 | 1958 | Private Observ |
| 108 | La Habra - Zinn Laborator | NR | 33-55-00 | 117-56-00 | 287 | 1931 | 1949 | Private Observ |
| 109 | Villa Park Orchard Associaot | NR | 33-48-53 | 117-49-20 | 300 | 1928 | 1980 | Private Observ |
| 111 | Full. Sunny Hills Ranch, Viejc | NR | 33-54-18 | 117-55-24 | 310 | 1937 | 1947 | Private Observ |
| 113 | Full. Sunny Hills Ranch, Red Tanl | NR | 33-54-30 | 117-56-18 | 390 | 1937 | 1947 | Private Observ |
| 114 | Full. Sunny Hills Ranch, Lemon Mes | NR | 33-53-06 | 117-57-12 | 228 | 1937 | 1947 | Private Observ |
| 115 | Full. Sunny Hills Ranch, Laborato | NR | 33-53-36 | 117-55-42 | 290 | 1937 | 1947 | Private Observ |
| 116 | Garden Grove - County Yar | S | 33-46-02 | 117-56-00 | 82 | 1938 | 1970 | City of Garden Grov |
| 125 | Irvine | R | 33-40-28 | 117-45-22 | 197 | 1936 | 1988 | OCPFRD |
| 126 | Fullerton Airpor | R | 33-52-23 | 117-58-24 | 101 | 1935 | 1988 | OCPFRD |
| 127 | Huntington Beach Heil Evaporatio | S | 33-43-24 | 118-02-12 | 15 | 1934 | 1945 | OCPFRD |
| 128 | Los Alamitos S.C.E. Substatiot | S | 33-48-36 | 118-04-09 | 26 | 1938 | 1950 | Private Observ |
| 129 | S.A.V.I. Office, Orange | NR | 43-46-50 | 117-51-20 | 160 | 1931 | 1944 | Private Observ |
| 130 | El Toro - Alios Ranch | NR | 33-39-50 | 117-40-05 | 640 | 1929 | 1977 | Private Observ |
| 131 | San Clemente Fire Statio | S | 32-25-38 | 117-36-31 | 260 | 1931 | 1977 | City of San Clemente |
| 132 | El Modena | R | 33-48-28 | 117-46-36 | 455 | 1938 | 1938 | NWS |
| 135 | Huntington Beach Ranch Compan | R | 33-40-48 | 117-59-49 | 75 | 1933 | 1984 | Private Observ |
| 136 | Olive Heights | NR | 33-50-17 | 117-50-43 | 245 | 1939 | 1984 | Private Observ |
| 138 | Brea Canyon - Diamond Bar Ranch | NR | 33-58-00 | 117-51-00 | 750 | 1930 | 1959 | Private Observ |
| 139 | Santa Ana Canyon - Ehman Ranch | NR | 33-51-12 | 117-46-48 | 320 | 1935 | 1959 | Private Observ |
| 142 | Lemon Heights | NR | 33-45-26 | 117-46-51 | 380 | 1944 | 1980 | Private Observ |
| 143 | Irvine - Salt Works | NR | 33-39-14 | 117-51-52 | 10 | 1944 | 1969 | Private Observ |
| 146 | Lambert Reservoi | R | 33-41-41 | 117-42-39 | 480 | 1945 | 1989 | OCPFRD |
| 148 | Orange - U.S. Forest Service | S | 33-47-17 | 117-50-26 | 200 | 1942 | 1980 | USFS |
| 151 | Aliso Canyon - Cook's Corne | S | 33-40-59 | 117-37-12 | 1080 | 1945 | 1975 | Private Observ |
| 158 | Los Alamitos | S | 33-48-35 | 118-04-35 | 24 | 1950 | 1988 | Private Observ |

Table 1 - continued

HISTORICAL PRECIPITATION STATIONS

| Sta. No. | Station Name | Equip Type | North Latitude | West Longitude | Elev Feet | Record Begins | Record Ends | Cooperator |
|----------|-----------------------------------|------------|----------------|----------------|-----------|---------------|-------------|--------------------------|
| 160 | Cypress - Lower | NR | 33-49-48 | 118-02-18 | 41 | 1951 | 1963 | Private Observer |
| 161 | Santa Ana - Scuddei | S | 33-45-07 | 117-53-22 | 99 | 1954 | 1978 | Private Observer |
| 162 | Westminster | R | 33-45-07 | 117-59-26 | 38 | 1955 | 1988 | OCPFRD |
| 164 | Capistrano Beach | R | 33-28-03 | 117-41-02 | 20 | 1955 | 1988 | OCPFRD |
| 166 | Tustin | R | 33-44-53 | 117-48-38 | 128 | 1957 | 1974 | OCPFRD |
| 167 | Anaheim - Agriculture Dept | R | 33-49-12 | 117-54-48 | 145 | 1957 | 1989 | OCPFRD |
| 171 | El Modena - Howe | S | 33-47-18 | 117-48-03 | 310 | 1959 | 1984 | Private Observer |
| 172 | Fullerton - County Yarc | S | 33-52-05 | 117-54-38 | 163 | 1959 | 1970 | OCPFRD |
| 175 | Orange - Campbell | NR | 33-47-27 | 117-50-22 | 220 | 1963 | 1970 | Private Observer |
| 180 | Silverado - Felde | NR | 33-44-45 | 117-36-02 | 1550 | 1956 | 1971 | Private Observer |
| 181 | Modjeska Canyon - McArthur | NR | 33-42-28 | 117-37-39 | 1300 | 1963 | 1993 | Private Observer |
| 182 | Hincky Canyon - Joplin Boys Ranch | NR | 33-40-43 | 117-34-23 | 1720 | 1963 | 1974 | Private Observer |
| 183 | Brea City Fire Dept | S | 33-54-53 | 117-54-04 | 351 | 1965 | 1986 | City of Brea |
| 187 | Stanton City Yarc | S | 33-46-26 | 118-00-27 | 55 | 1966 | 1975 | City of Stanton |
| 189 | Long Beach - Lees Street | R | 33-46-40 | 118-06-05 | 10 | 1964 | 1974 | LACDPW |
| 192 | El Cariso Guard Station | R | 33-39-00 | 117-24-43 | 2660 | 1965 | 1997 | NSFS/RCFCWCD |
| 191 | Santa Ana Fire Station | S | 33-44-39 | 117-52-02 | 115 | 1907 | 1984 | NWS/City of Santa Ana |
| 196 | Irvine Country Club | NR | 33-36-43 | 117-52-56 | 105 | 1969 | 1976 | The Irvine Co |
| 197 | Bryant Ranch | S | 33-52-32 | 117-42-28 | 425 | 1965 | 1988 | Private Observer |
| 198 | Oak Flat | R | 33-49-15 | 117-38-18 | 2700 | 1969 | 1989 | OCPFRD |
| 201 | Mission Viejo Cow Camp | NR | 33-31-21 | 117-35-31 | 300 | 1969 | 1989 | Private Observer |
| 203 | Moulton Niguel Water District | S | 33-34-41 | 117-40-23 | 300 | 1969 | 1985 | Water District Personnel |
| 204 | Green River Golf Course | S | 33-52-24 | 117-40-15 | 460 | 1969 | 1994 | Private Observer |
| 207 | Coto de Caza | NR | 33-35-14 | 117-35-05 | 970 | 1971 | 1988 | Private Observer |
| 210 | Silverado Canyon - Guar | NR | 33-44-48 | 117-36-55 | 1410 | 1971 | 1997 | Private Observer |
| 211 | Laguna Niguel-South County Garage | S | 33-31-29 | 117-42-58 | 350 | 1973 | 1988 | O.C. Garage Personne |
| 217 | Huntington Beach - James | S | 33-43-33 | 118-02-37 | 9 | 1974 | 1988 | Private Observer |
| 218 | Long Beach #1 | R | 33-46-46 | 118-08-36 | 15 | 1925 | 1980 | LACDPW |
| 221 | San Juan Capistrano - Lacouagu | R | 33-30-33 | 117-37-55 | 140 | 1979 | 1988 | OCPFRD/Priv Observer |
| 226 | O.C. Fire Station #15 | S | 33-46-16 | 117-44-24 | 300 | 1977 | 1988 | OCPFRD |
| 228 | San Clemente - Smith | NR | 33-25-00 | 117-36-50 | 100 | 1962 | 1988 | Private Observer |
| 261 | Huntington Beach | A | 33-43-02 | 117-59-57 | 20 | 1983 | 2001 | OCPFRD |
| 294 | Anaheim - Agriculture Dept | A | 33-49-12 | 117-54-48 | 148 | 1989 | 1999 | OCPFRD |

S- Standard 8 inch Non-recording Gage NR - Non-Recording Other Than Standard Gage R - Automatic Recording Gage A - ALERT

HISTORICAL WATER LEVEL STATIONS

| Sta. No. | Station Name | Equip Type | North Latitude | West Longitude | Elev Feet | Record Begins | Record Ends | Cooperator |
|----------|-----------------------------|------------|----------------|----------------|-----------|---------------|-------------|------------|
| 260 | EGG-Wintersburg | W/L | 33-43-02 | 117-59-57 | 20 | 1983 | 2001 | OCPFRD |
| 1190 | Trabuco Creek @ Camino Capo | W/L | 33-31-34 | 117-40-07 | 200 | 1983 | 1997 | OCPFRD |

Table 2

ACTIVE RECORDING/NON-RECORDING PRECIPITATION STATIONS

| Sta. No. | Station Name | Equip Type | North Latitude | West Longitude | Elev Feet | Record Begins | Cooperator |
|----------|------------------------------------|------------|----------------|----------------|-----------|---------------|--------------------------|
| 4 | La Mirada Standard OI | R | 33-52-59 | 118-01-00 | 64 | 1925 | LACDPW |
| 5 | Buena Park | S | 33-51-28 | 117-59-29 | 79 | 1926 | City of Buena Park |
| 18 | Diamond Bar Fire Station | R | 33-59-29 | 117-48-35 | 720 | 1930 | LACDPW |
| 61 | Tustin - Irvine Ranch | S | 33-43-46 | 117-46-58 | 118 | 1897 | NWS/Treasure Farms |
| 88 | Newport Beach Harbor Master | S | 33-36-16 | 117-53-00 | 8 | 1921 | NWS/O.C. Sheriff |
| 96 | Fullerton Hillcrest Reservoir | S | 33-53-00 | 117-55-12 | 320 | 1933 | City of Fullerton |
| 100 | Laguna Beach Treatment Plant | S | 33-32-49 | 117-46-53 | 50 | 1928 | NWS/City of Laguna Beach |
| 118 | Santiago Dam | R | 33-47-13 | 117-43-16 | 855 | 1932 | NWS/COE |
| 119 | Silverado Ranger Station | R | 33-44-34 | 117-39-29 | 1095 | 1938 | NWS/USFS |
| 121 | Santa Ana - OCEMA | R | 33-45-04 | 117-52-11 | 170 | 1933 | OCPFRD |
| 133 | Trabuco Canyon | R | 33-39-26 | 117-36-00 | 970 | 1939 | NWS/OCPFRD |
| 134 | San Juan Guard Station | R | 33-35-30 | 117-30-47 | 728 | 1939 | NWS/OCPFRD |
| 141 | Laguna Beach Number 2 | R | 33-33-03 | 117-48-01 | 64 | 1940 | NWS/City of Laguna |
| 144 | Orange County Reservoir, Brea | R | 33-56-07 | 117-52-58 | 660 | 1943 | NWS/COE |
| 145 | Prado Dam | R | 33-53-25 | 117-38-10 | 550 | 1942 | NWS/COE |
| 152 | La Habra Fire Station | R | 33-55-53 | 117-57-13 | 287 | 1926 | City of La Habra |
| 153 | Fullerton Dam | R | 33-53-50 | 117-53-07 | 340 | 1946 | NWS/COE |
| 154 | Brea Dam | R | 33-52-25 | 117-55-30 | 275 | 1946 | NWS/COE |
| 156 | Santiago Peak | R | 33-42-39 | 117-31-59 | 5660 | 1949 | NWS/OCPFRD |
| 163 | Yorba Reservoir | R | 33-52-19 | 117-48-37 | 394 | 1955 | OCPFRD |
| 165 | Costa Mesa | R | 33-40-07 | 117-53-35 | 53 | 1955 | OCPFRD |
| 169 | Corona Del Mar | R | 33-36-35 | 117-51-27 | 300 | 1959 | OCPFRD |
| 170 | Los Alamitos Basin | R | 33-45-24 | 118-05-43 | 7 | 1958 | OCPFRD |
| 173 | Villa Park Dam | R | 33-48-53 | 117-46-00 | 566 | 1961 | OCPFRD |
| 174 | Atwood - O.C. Water Dist. | S | 33-51-33 | 117-49-04 | 260 | 1963 | Water District Personnel |
| 176 | El Toro | R | 33-37-39 | 117-41-26 | 445 | 1964 | OCPFRD |
| 178 | El Toro - James A. Musick | S | 33-39-52 | 117-41-43 | 520 | 1965 | Private Observer |
| 184 | Garden Grove | S | 33-46-35 | 117-55-49 | 120 | 1964 | City of Garden Grove |
| 185 | Carbon Canyon - Gilmar | R | 33-55-24 | 117-46-31 | 1625 | 1954 | NWS/COE |
| 186 | San Clemente - Palisades Reservoir | S | 33-27-46 | 117-39-02 | 360 | 1965 | Private Observer |
| 188 | Carbon Canyon - Workman | R | 33-57-30 | 117-46-42 | 1100 | 1949 | NWS/COE |
| 190 | La Habra Heights Mutual Water Co | R | 33-56-55 | 117-57-50 | 455 | 1964 | LACDPW |
| 200 | Anaheim - OCEMA Katella Yard | NR | 33-48-11 | 117-52-34 | 160 | 1964 | OCPFRD |
| 206 | Trabuco Forestry | S | 33-39-15 | 117-35-34 | 970 | 1971 | O.C. Fire Authority |
| 212 | Anaheim - Lewis Substation | NR | 33-48-37 | 117-53-51 | 150 | 1973 | Private Observer |
| 214 | Modjeska Canyon - Tucker Wildlife | R | 33-42-35 | 117-37-08 | 1200 | 1974 | OCPFRD |
| 216 | Laguna Niguel - Sulphur Creek Dam | R | 33-32-59 | 117-42-20 | 200 | 1974 | OCPFRD |
| 219 | Costa Mesa Water District | S | 33-38-46 | 117-55-54 | 30 | 1978 | Water District Personnel |
| 222 | Orange - Hardacre | NR | 33-48-53 | 117-49-20 | 298 | 1980 | Private Observer |
| 229 | Garden Grove Fire Station | R | 33-47-26 | 117-58-03 | 80 | 1985 | OCPFRD |
| 231 | Pelican Hills Golf Course | R | 33-35-30 | 117-51-00 | 250 | 1993 | Private Observer |
| 234 | Moulton Niguel Water District | S | 33-34-36 | 117-40-20 | 300 | 1994 | Water District Personnel |

Type: S - Standard 8 inch Non-recording Gage NR - Non-Recording Gage Other Than Standard Gage R - Automatic Recording Gage

Table 3

ACTIVE ALERT STATIONS

| Sta. No. | Station Name | Equip Type | North Latitude | West Longitude | Elev Feet | Record Begins |
|----------|------------------------------|------------|----------------|----------------|-----------|---------------|
| 201 | Santiago Peak | P | 33-42-39 | 117-31-59 | 5660 | 1982 |
| 202 | Santiago Peak | T | 33-42-39 | 117-31-59 | 5660 | 1998 |
| 203 | Portola Park | P | 33-46-00 | 117-50-33 | 182 | 1991 |
| 205 | Santiago Peak | P | 33-42-39 | 117-31-59 | 5660 | 1982 |
| 206 | Alico Creek @ Jeronimc | W | 33-37-30 | 117-41-07 | 455 | 1983 |
| 207 | El Toro | P | 33-37-30 | 117-44-14 | 455 | 1983 |
| 208 | Santiago Peak | S | 33-42-39 | 117-31-59 | 5660 | 1998 |
| 209 | San Juan Guard | P | 33-35-19 | 117-30-54 | 660 | 1983 |
| 210 | Santiago Peak | A | 33-42-39 | 117-31-59 | 5660 | 1998 |
| 212 | Oso Creek @ Crown Valley | W | 33-33-28 | 177-40-32 | 260 | 1983 |
| 213 | Oso Creek @ Crown Valley | P | 33-33-28 | 177-40-32 | 260 | 1983 |
| 214 | San Juan Creek | W | 33-29-30 | 117-39-43 | 75 | 1984 |
| 215 | San Juan Capistranc | P | 33-29-30 | 117-39-43 | 75 | 1984 |
| 217 | Lambert Reservoi | P | 33-41-41 | 117-42-39 | 450 | 1989 |
| 219 | Santa Ana Engineerinç | P | 33-45-04 | 117-52-11 | 170 | 1989 |
| 220 | Villa Park Dam | P | 33-48-59 | 117-46-00 | 560 | 1983 |
| 221 | Villa Park Dam | A | 33-48-59 | 117-46-00 | 560 | 1983 |
| 223 | Katella Yarc | P | 33-48-11 | 117-52-34 | 160 | 1988 |
| 225 | Santiago Creek, Santa An: | W | 33-46-09 | 117-52-54 | 120 | 1989 |
| 226 | Santiago Creek, Santa An: | P | 33-46-09 | 117-52-54 | 120 | 1989 |
| 229 | Loma Ridge | P | 33-45-55 | 117-45-47 | 1306 | 1999 |
| 230 | Loma Ridge | A | 33-45-55 | 117-45-47 | 1306 | 1999 |
| 231 | Lower Oso Creek | W | 33-32-34 | 117-40-33 | 220 | 1994 |
| 232 | Lower Oso Creek | P | 33-32-34 | 117-40-33 | 220 | 1994 |
| 233 | Modjeska Canyon | P | 33-42-32 | 117-38-05 | 1260 | 1984 |
| 234 | Sand Canyon Channe | W | 33-39-25 | 117-49-39 | 62 | 2001 |
| 238 | Westminster Channel @ Beach | W | 33-45-07 | 117-59-26 | 40 | 1989 |
| 239 | Westminster Channel @ Beach | P | 33-45-07 | 117-59-26 | 40 | 1989 |
| 240 | Miller Basin | W | 33-51-53 | 117-51-09 | 220 | 1983 |
| 241 | Miller Basin | P | 33-51-53 | 117-51-09 | 220 | 1983 |
| 244 | Prado Dam Outflow | W | 33-53-00 | 117-38-39 | 460 | 1983 |
| 245 | Prado Dam | P | 33-53-00 | 117-38-39 | 460 | 1983 |
| 248 | Coto De Caza | P | 33-37-44 | 117-35-00 | 730 | 1993 |
| 251 | Oak Flat | P | 33-49-46 | 117-38-19 | 2700 | 1983 |
| 252 | El Modena - Irvine @ Michell | W | 33-43-12 | 117-47-54 | 70 | 1989 |
| 253 | El Modena - Irvine @ Michell | P | 33-43-12 | 117-47-54 | 70 | 1989 |
| 254 | Brookhurst Tide | W | 33-38-12 | 117-57-12 | 0 | 1992 |
| 256 | Lower Silverado Canyo | P | 33-44-33 | 117-39-28 | 1100 | 1984 |
| 258 | Magnolia Tide | W | 33-38-30 | 117-58-10 | 7 | 1984 |
| 263 | Corona Del Mai | P | 33-36-45 | 117-51-27 | 300 | 1984 |
| 265 | Brea | P | 33-55-19 | 117-54-04 | 340 | 1983 |
| 267 | Placentia Basin | W | 33-51-30 | 117-53-00 | 190 | 1984 |
| 270 | Yorba Park | P | 33-52-00 | 117-46-11 | 300 | 1988 |
| 274 | Sand Canyon | P | 33-40-38 | 117-45-33 | 200 | 1989 |
| 279 | Bonita Canyon Channe | W | 33-38-37 | 117-51-39 | 55 | 2001 |
| 277 | Fullerton Creek | P | 33-51-47 | 117-55-55 | 95 | 1988 |

Table 3 - continued

ACTIVE ALERT STATIONS

| Sta. No. | Station Name | Equip Type | North Latitude | West Longitude | Elev Feet | Record Begins |
|----------|-------------------------------------|------------|----------------|----------------|-----------|---------------|
| 1187 | Upper East Garden Grove Wintersburg | W | 33-47-10 | 117-54-03 | 120 | 1993 |
| 1188 | Upper East Garden Grove Wintersburg | P | 33-47-10 | 117-54-03 | 120 | 1993 |
| 1192 | Bee Canyon | P | 33-43-07 | 117-43-34 | 755 | 1996 |
| 1194 | San Diego Creek @ Culver | W | 33-40-54 | 117-48-31 | 54 | 1990 |
| 1195 | San Diego Creek @ Culver | P | 33-40-54 | 117-48-31 | 70 | 1990 |
| 1198 | Brea Olinda | P | 33-56-01 | 117-50-35 | 750 | 1996 |
| 8014 | Seal Beach Pump Station | P | 33-44-30 | 118-07-00 | 5 | 1988 |
| 8018 | Seal Beach Pump Station | W | 33-44-30 | 118-07-00 | 5 | 1988 |
| 8036 | Cypress Pump Station | P | 33-49-07 | 118-03-32 | 30 | 1988 |
| 8041 | Cypress Pump Station | W | 33-49-07 | 118-03-32 | 30 | 1988 |
| 8085 | Huntington Beach Pump Station | P | 33-40-19 | 117-59-00 | 5 | 1988 |
| 8089 | Huntington Beach Pump Station | W | 33-40-19 | 117-59-00 | 5 | 1988 |
| 8110 | Harbor at Edinger SAR Pump Station | P | 33-43-05 | 117-55-12 | 50 | 1992 |
| 8114 | Harbor at Edinger SAR Pump Station | W | 33-43-05 | 117-55-12 | 50 | 1992 |
| 8132 | Los Alamitos Pump Station | P | 33-45-24 | 118-45-43 | 7 | 1992 |
| 8136 | Los Alamitos Pump Station | W | 33-45-24 | 118-45-43 | 7 | 1992 |
| 8150 | South Park Pump Station | W | 33-45-11 | 117-55-57 | 33 | 1996 |

800 series stations are outside Orange County

P = Precipitation

A = Anemometer - Wind Velocity

W = Water Level

S = Snow

T = Temperature

Table 3 - continued

ACTIVE ALERT STATIONS

| Sta. No. | Station Name | Equip Type | North Latitude | West Longitude | Elev Feet | Record Begins |
|----------|-------------------------------------|------------|----------------|----------------|-----------|---------------|
| 282 | Peters Canyon Wash @ Barranca | W | 33-41-40 | 117-49-16 | 25 | 1987 |
| 283 | Peters Canyon Wash @ Barranca | P | 33-41-40 | 117-49-16 | 40 | 1987 |
| 287 | Oceanview | W | 33-43-12 | 117-55-54 | 43 | 1993 |
| 288 | Oceanview | P | 33-43-12 | 117-55-54 | 43 | 1993 |
| 290 | Raymond Basir | W | 33-50-52 | 117-54-31 | 165 | 1988 |
| 292 | Alameda Storm Ch | W | 33-48-21 | 117-48-06 | 339 | 1989 |
| 293 | Alameda Storm Ch | P | 33-48-21 | 117-48-06 | 339 | 1989 |
| 297 | Upper Oso Creek | P | 33-39-13 | 117-39-21 | 420 | 1991 |
| 805 | Riverside Flood Contr | P | 33-58-49 | 117-21-47 | 830 | 1983 |
| 810 | Gavilan Hills | P | 33-47-23 | 117-23-46 | 2040 | 1983 |
| 819 | Chino Creek | W | 34-00-43 | 117-43-47 | 715 | 1984 |
| 820 | Chino Creek | P | 34-00-43 | 117-43-47 | 715 | 1984 |
| 828 | San Antonio Darr | P | 34-09-23 | 117-40-54 | 2000 | 1985 |
| 832 | Camp Angelus | P | 34-09-00 | 116-58-40 | 5780 | 1984 |
| 1100 | Lacouaque | P | 33-30-33 | 117-37-55 | 141 | 1990 |
| 1105 | Bolsa Chica Channe | W | 33-45-33 | 118-02-30 | 7 | 1990 |
| 1107 | Santiago Creek @ Gravel Pit | W | 33-47-59 | 117-48-08 | 320 | 1995 |
| 1110 | Santa Ana - Delhi Channe | W | 33-39-36 | 117-52-49 | 24 | 1989 |
| 1111 | Santa Ana - Delhi Channe | P | 33-39-36 | 117-52-49 | 24 | 1989 |
| 1113 | Agua Chinon @ El Torc | W | 33-40-79 | 117-42-75 | 446 | 2002 |
| 1116 | Anaheim - Barber City | W | 33-45-16 | 118-02-04 | 7 | 1990 |
| 1117 | Anaheim - Barber City | P | 33-45-16 | 118-02-04 | 20 | 1990 |
| 1119 | Laguna Beach @ Woodlanc | W | 33-33-11 | 117-46-26 | 67 | 1990 |
| 1120 | Laguna Beach @ Woodlanc | P | 33-33-21 | 117-46-45 | 600 | 1990 |
| 1124 | San Diego Crk. @ Campus | W | 33-39-20 | 117-50-42 | 10 | 1990 |
| 1125 | San Diego Crk. @ Campus | P | 33-39-20 | 117-50-42 | 20 | 1990 |
| 1130 | Laguna Audubor | P | 33-36-04 | 117-44-36 | 314 | 1990 |
| 1133 | Laguna Audubor | W | 33-36-04 | 117-44-36 | 314 | 1992 |
| 1135 | Santiago Creek @ E08 | W | 33-42-47 | 117-38-42 | 1220 | 1993 |
| 1136 | Santiago Creek @ E08 | P | 33-42-47 | 117-38-42 | 1220 | 1993 |
| 1140 | Fullerton Airpor | P | 33-52-23 | 117-58-24 | 95 | 1990 |
| 1141 | Upper Aliso Creek | P | 33-38-20 | 117-40-12 | 560 | 1991 |
| 1145 | Pico Retarding Basin-San Clement | P | 33-24-32 | 117-35-10 | 250 | 1993 |
| 1146 | Aliso Creek @ Sewage Treatment Plar | W | 33-31-03 | 117-44-26 | 15 | 2001 |
| 1150 | Costa Mesa | P | 33-40-07 | 117-53-35 | 47 | 1990 |
| 1152 | Laguna Niguel Parl | P | 33-32-49 | 117-42-25 | 200 | 1991 |
| 1155 | Segunda Desheca | P | 33-26-10 | 117-35-30 | 85 | 1993 |
| 1160 | El Cariso Guard Statior | P | 33-37-30 | 117-24-42 | 2600 | 1990 |
| 1165 | Yorba Reservoi | P | 33-52-19 | 117-48-37 | 300 | 1990 |
| 1170 | Upper Silverado Canyon | P | 33-44-50 | 117-32-34 | 2880 | 1990 |
| 1172 | Marshburn Channel @ Trabucc | W | 33-41-07 | 117-44-74 | 249 | 2002 |
| 1175 | Garden Grove | P | 33-47-58 | 117-58-03 | 80 | 1990 |
| 1177 | Fullerton Crk @ Beach | W | 33-51-45 | 117-59-53 | 75 | 1995 |
| 1178 | Fullerton Crk @ Beach | P | 33-51-45 | 117-59-53 | 75 | 1995 |
| 1180 | Gilbert Retention Basir | P | 33-50-20 | 117-57-42 | 100 | 1990 |
| 1182 | Irvine Lake Darr | W | 33-47-00 | 117-43-34 | 820 | 1983 |

Table 4

PRECIPITATION SUMMARY
For
SELECTED STATIONS
(2001-2002)

| NO | NAME | SEASON TOTAL (Inches) | DAYS OF PRECIPITATION PRESENT SEASON | MAXIMUM SEASON RAINFALL | | MINIMUM SEASON RAINFALL | | MEAN (no. of complete service years) |
|-----|-----------------------|--------------------------|--|----------------------------|---------|----------------------------|---------|--|
| | | | | INCHES | YEAR | INCHES | YEAR | |
| 5 | Buena Park | 4.08 | 20 | 34.10 | 1977-78 | 3.32 | 1960-61 | 13.36 (73) |
| 61 | Tustin-Irvine Ranch | 4.22 | 25 | 34.72 | 1997-98 | 4.12 | 1960-61 | 12.72 (105) |
| 88 | Newport Beach Harbor | 3.55 | 23 | 28.17 | 1940-41 | 3.00 | 1960-61 | 11.41 (81) |
| 96 | Fullerton - Hillcrest | 4.88 | 27 | 36.19 | 1940-41 | 4.27 | 1960-61 | 14.33 (71) |
| 100 | Laguna Beach | 4.93 | 24 | 35.08 | 1997-98 | 4.12 | 1960-61 | 12.21 (70) |
| 121 | Santa Ana - OCPFRD | 3.82 | 23 | 32.14 | 1940-41 | 3.56 | 1960-61 | 13.01 (94) |
| 163 | Yorba Reservoir | 4.85 | 26 | 32.81 | 1977-78 | 4.58 | 1960-61 | 14.25 (46) |
| 165 | Costa Mesa | 4.27 | 25 | 29.11 | 1997-98 | 3.73 | 1960-61 | 12.15 (47) |
| 169 | Corona Del Mar | 3.94 | 24 | 31.88 | 1997-98 | 2.94 | 1960-61 | 12.55 (42) |
| 170 | Los Alamitos | 2.87 | 24 | 22.09 | 1977-78 | 2.73 | 1960-61 | 10.15 (43) |
| 173 | Villa Park Dam | 5.24 | 32 | 34.89 | 1997-98 | 5.24 | 2001-02 | 15.09 (41) |
| 176 | EI Toro | 4.45 | 26 | 38.58 | 1997-98 | 4.45 | 2001-02 | 14.93 (38) |
| 186 | Palisades Reservoir | 4.21 | 18 | 28.70 | 1997-98 | 4.21 | 2001-02 | 13.27 (35) |
| 206 | Trabuco Forestry | 6.22 | 19 | 43.58 | 1997-98 | 6.22 | 2001-02 | 19.93 (32) |
| 208 | Santiago Peak | 11.24 | 32 | 106.15 | 1997-98 | 11.24 | 2001-02 | 34.53 (53)P |
| 216 | Sulphur Creek Dam | 5.10 | 24 | 35.32 | 1997-98 | 5.10 | 2001-02 | 14.47 (28) |
| 222 | Orange - Hardacre | 4.96 | 30 | 33.63 D | 1977-78 | 3.90 D | 1960-61 | 14.02 (74) |
| 229 | Garden Grove Fire | 3.40 | 21 | 28.02 | 1997-98 | 3.40 | 2001-02 | 12.26 (17) |

D = Data from nearby Station - #109 V.P. Orchard Assoc.

P = Prior to 1996 Season data taken from NWS #156

Table 5
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Buena Park - Sta. 5

GAGE ELEVATION: 79'
 SEASON TOTAL: 4.08
 RECORDS: 1927 to Present
 MEAN: * 13.36
 SEASON AS %: 30.5

LATITUDE 33-51-28
 LONGITUDE 117-59-29
 40 YEAR BASE PERIOD: 1963-2002
 MEAN: 13.95
 SEASON AS %: 29.2

| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
|-----|------|------|------|------|------|-------|------|------|-------|------|------|------|-----|
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | 2 |
| 3 | | | | | | | | | | | | | 3 |
| | | | | 0.30 | 0.10 | | | | | | | | 4 |
| | | | | | | | | | | | | | 5 |
| | | | | | | | | | | | | | 6 |
| | | | | | | | | 0.10 | | | | | 6 |
| | | | | | | | | | | | | | 7 |
| | | | | | | | | | *0.04 | | | | 7 |
| | | | | | | | | | | | | | 8 |
| | | | | | | | | | | | | | 9 |
| | | | | | | | | | | | | | 10 |
| | | | | | | | | | | | | | 11 |
| | | | | | | | | | | | | | 12 |
| | | | | 0.45 | | | | | | | | | 13 |
| | | | | | | | | | | | | | 14 |
| | | | | | | | | | | | | | 15 |
| | | | | | 0.20 | | T | | | | | | 15 |
| | | | | | | | | | | | | | 16 |
| | | | | | | | | | | | | | 17 |
| | | | | | | | | | | | | | 18 |
| | | | | | 0.15 | *0.04 | | | | | | | 18 |
| | | | | | | | | | | | | | 19 |
| | | | | | | | | | | | | | 20 |
| | | | | | | | | | | | | | 20 |
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| | | | | | | | | | | | | | 22 |
| | | | | | | | | | | | | | 23 |
| | | | | | | | | | *0.08 | | | | 23 |
| | | | | | | | | | | | | | 24 |
| | | | | | | | | | | | | | 25 |
| | | | | | | | | | | | | | 26 |
| | | | | | | | | | | | | | 26 |
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| | | | | | | | | | | | | | 30 |
| | | | | | | | | | | | | | 31 |
| | | | | | | | | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.40 | 1.40 | 0.60 | 0.15 | 0.16 | 0.22 | 0.15 | 0.00 | |

--LEGEND--

A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE

P - INCLUDED IN FOLLOWING TOTAL

REMARKS * Total from ALERT 1180

| SEASON | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | TOTAL | |
|-----------|------|------|-------|-------|-------|-------|--------|--------|--------|-------|------|------|--------|-------|
| 1962-1963 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.11 | 4.04 | 1.84 | 1.35 | 0.00 | 0.31 | 7.69 | |
| 1963-1964 | 0.00 | 0.05 | 2.01 | 0.46 | 2.78 | 0.00 | 0.88 | 0.00 | 1.24 | 0.41 | 0.05 | 0.10 | 7.98 | |
| 1964-1965 | 0.00 | 0.00 | 0.00 | 0.11 | 1.18 | 1.39 | 0.50 | 0.10 | 1.70 | 4.43 | 0.00 | 0.00 | 9.41 | |
| 1965-1966 | 0.00 | 0.10 | 0.34 | 0.00 | 6.45 | 3.50 | 0.90 | 1.30 | 0.30 | 0.00 | 0.00 | 0.00 | 12.89 | |
| 1966-1967 | 0.00 | 0.00 | 0.00 | 0.00 | 1.52 | 3.63 | 3.53 | 0.00 | 1.51 | 2.97 | 0.00 | 0.10 | 13.26 | |
| 1967-1968 | 0.00 | 0.00 | 0.45 | 0.00 | 2.75 | 1.96 | 0.60 | 0.40 | 3.10 | 0.80 | 0.00 | 0.00 | 10.06 | |
| 1968-1969 | 0.05 | 0.20 | 0.00 | 0.11 | 0.58 | 1.70 | 11.21 | 7.27 | 1.27 | 0.53 | 0.00 | 0.00 | 22.92 | |
| 1969-1970 | 0.00 | 0.00 | 0.00 | 0.00 | 1.60 | 0.10 | 1.98 | 1.75 | 2.00 | 0.00 | 0.00 | 0.00 | 7.43 | |
| 1970-1971 | 0.00 | 0.00 | 0.00 | 0.00 | 2.42 | 3.63 | 0.52 | 0.50 | 0.20 | 0.55 | 0.30 | 0.00 | 8.12 | |
| 1971-1972 | 0.00 | 0.00 | 0.00 | 0.20 | 0.20 | 10.01 | 0.00 | 0.00 | 0.00 | 0.10 | 0.20 | 0.38 | 11.09 | |
| 1972-1973 | 0.00 | 0.40 | 0.20 | 0.80 | 4.62 | 1.65 | 3.10 | 5.17 | 3.19 | 0.00 | 0.00 | 0.00 | 19.13 | |
| 1973-1974 | 0.00 | 0.00 | 0.00 | 0.10 | 1.95 | 0.48 | 7.05 | 0.00 | 3.99 | 0.20 | 0.00 | 0.00 | 13.77 | |
| 1974-1975 | 0.00 | 0.00 | 0.00 | 0.90 | 0.00 | 4.33 | 0.10 | 2.80 | 4.20 | 1.50 | 0.10 | 0.00 | 13.93 | |
| 1975-1976 | 0.00 | 0.00 | 0.00 | 0.35 | 0.20 | 0.20 | 0.00 | 3.15 | 1.35 | 1.10 | 0.00 | 0.30 | 6.65 | |
| 1976-1977 | 0.00 | 0.00 | 2.55 | 0.00 | 0.60 | 0.40 | 2.95 | 0.70 | 1.25 | 0.00 | 2.65 | 0.00 | 11.10 | |
| 1977-1978 | 0.00 | 2.15 | 0.00 | 0.00 | 4.55 | 7.95 | 8.00 | 9.55 | 1.80 | 0.10 | 0.00 | 0.00 | 34.10 | |
| 1978-1979 | 0.00 | 0.00 | 0.90 | 0.00 | 2.40 | 2.10 | 8.35 | 2.60 | 6.30 | 0.00 | 0.00 | 0.00 | 22.65 | |
| 1979-1980 | 0.00 | 0.00 | 0.00 | 0.55 | 0.20 | 0.30 | 8.40 | 10.35 | 3.90 | 0.40 | 0.10 | 0.00 | 24.20 | |
| 1980-1981 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.20 | 2.55 | 1.35 | 3.30 | 0.30 | 0.00 | 0.00 | 8.70 | |
| 1981-1982 | 0.00 | 0.00 | 0.45 | 0.20 | 0.75 | 4.00 | 0.60 | 2.90 | 0.35 | 5.58 | 1.30 | 0.10 | 0.00 | 15.58 |
| 1982-1983 | 0.00 | 0.00 | 0.45 | 0.20 | 3.10 | 1.60 | 4.20 | 5.05 | 10.30 | 3.00 | 0.30 | 0.00 | 28.20 | |
| 1983-1984 | 0.00 | 0.20 | 0.90 | 3.55 | 2.85 | 1.80 | 0.45 | 0.00 | 0.20 | 0.40 | 0.00 | 0.00 | 10.35 | |
| 1984-1985 | 0.00 | 0.15 | 0.25 | 0.08 | 1.92 | 5.60 | 1.30 | 1.55 | 0.95 | 0.05 | 0.15 | 0.00 | 12.00 | |
| 1985-1986 | 0.00 | 0.00 | 0.35 | 0.10 | 2.15 | 1.85 | 1.10 | 5.50 | 3.15 | 0.60 | 0.00 | 0.00 | 14.80 | |
| 1986-1987 | 0.20 | 0.00 | 1.60 | 0.20 | 0.60 | 0.20 | 3.15 | 0.83 | 0.95 | 0.15 | 0.00 | 0.20 | 8.08 | |
| 1987-1988 | 0.00 | 0.00 | 0.00 | 1.60 | 0.80 | 1.20 | 1.90 | 0.85 | 0.40 | 2.25 | 0.00 | 0.00 | 9.00 | |
| 1988-1989 | 0.00 | 0.00 | 0.00 | 0.00 | 0.35 | 4.15 | 0.80 | 1.35 | 0.90 | 0.00 | 0.00 | 0.00 | 7.55 | |
| 1989-1990 | 0.00 | 0.00 | 0.45 | 0.40 | 0.30 | 0.00 | 1.50 | 3.50 | 0.10 | 0.65 | 0.80 | 0.55 | 8.25 | |
| 1990-1991 | 0.00 | 0.00 | 0.00 | 0.00 | 0.55 | 0.00 | 1.70 | 3.10 | 6.90 | 0.00 | 0.00 | 0.00 | 12.25 | |
| 1991-1992 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 2.00 | 1.75 | 7.40 | 5.25 | 0.00 | 0.00 | 0.00 | 16.50 | |
| 1992-1993 | 0.00 | 0.00 | 0.00 | 0.85 | 0.00 | 6.50 | 11.00 | 6.50 | 1.80 | 0.00 | 0.00 | 0.90 | 27.55 | |
| 1993-1994 | 0.00 | 0.00 | 0.00 | 0.00 | 1.05 | 1.35 | 0.35 | 4.45 | 2.00 | 0.10 | 0.35 | 0.00 | 9.65 | |
| 1994-1995 | 0.00 | 0.00 | 0.00 | 0.00 | 0.90 | 0.80 | 12.75 | 0.90 | 6.90 | 0.70 | 0.00 | 0.60 | 23.55 | |
| 1995-1996 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.30 | 1.05 | 5.40 | 1.55 | 0.70 | 0.00 | 0.00 | 10.00 | |
| 1996-1997 | 0.00 | 0.00 | 1.10 | 0.00 | 1.10 | 2.85 | 4.52 | 6.10 | 0.10 | 0.00 | 0.00 | 0.00 | 14.67 | |
| 1997-1998 | 0.00 | 0.00 | 0.50 | 0.00 | 2.50 | 3.50 | 2.70 | 13.30 | 4.70 | 1.00 | 2.10 | 0.10 | 30.40 | |
| 1998-1999 | 0.00 | 0.00 | 0.00 | 0.00 | 1.40 | 0.95 | 1.85 | 0.60 | 1.10 | 2.20 | 0.00 | 0.35 | 8.45 | |
| 1999-2000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.75 | 5.10 | 1.85 | 1.20 | 0.00 | 9.00 | |
| 2000-2001 | 0.00 | 0.00 | 0.20 | 2.00 | 0.25 | 0.00 | 4.20 | 4.85 | 0.80 | 0.80 | 0.00 | 0.00 | 13.10 | |
| 2001-2002 | 0.00 | 0.00 | 0.00 | 0.00 | 1.40 | 1.40 | 0.60 | 0.15 | 0.16 | 0.22 | 0.15 | 0.00 | 4.08 | |
| Totals | 0.25 | 3.25 | 11.15 | 14.55 | 56.42 | 80.55 | 122.78 | 120.31 | 105.73 | 31.76 | 7.45 | 3.89 | 558.09 | |
| Average | 0.01 | 0.08 | 0.28 | 0.36 | 1.41 | 2.01 | 3.07 | 3.01 | 2.64 | 0.79 | 0.19 | 0.10 | 13.95 | |
| Max | 0.20 | 2.15 | 2.55 | 3.55 | 6.45 | 10.01 | 12.75 | 13.30 | 10.30 | 4.43 | 2.65 | 0.90 | 34.10 | |

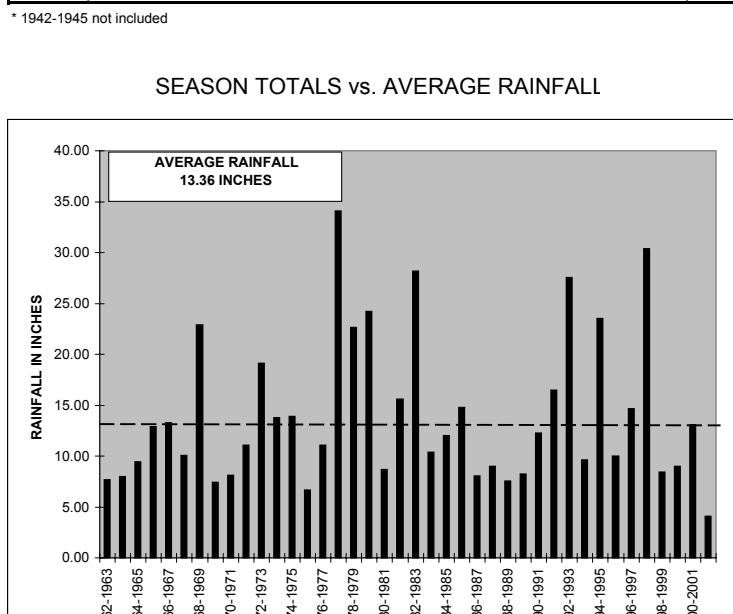


Table 6
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Tustin - Irvine Ranch - Sta. 61

GAGE ELEVATION: 118'
 SEASON TOTAL: 4.22
 RECORDS: 1898 to Present
 MEAN: * 12.72
 SEASON AS %: 33.2

LATITUDE 33-43-46
 LONGITUDE 117-46-58
 40 YEAR BASE PERIOD: * 1962-2002
 MEAN: 13.31
 SEASON AS %: 31.7

| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | 0.15 | | | | | | | | 2 |
| 3 | | | | | | | | | | | | | 3 |
| 4 | | | | 0.06 | 0.05 | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | 5 |
| 6 | | | | | | | | 0.12 | | | | | 6 |
| 7 | | | | | | | | 0.22 | | | | | 7 |
| 8 | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | 0.10 | | | | | 10 |
| 11 | | | | | 0.04 | | | | | | | | 11 |
| 12 | | | | 0.36 | | | | | | | | | 12 |
| 13 | | | | | | | | | | | | | 13 |
| 14 | | | | | | | | | | | | | 14 |
| 15 | | | | | | | 0.07 | | | | | | 15 |
| 16 | | | | | | | | | | | | | 16 |
| 17 | | | | | 0.40 | 0.29 | | | | | | | 17 |
| 18 | | | | | | | | | | | | | 18 |
| 19 | | | | | | | 0.07 | | | | | | 19 |
| 20 | | | | | | | 0.10 | | | | | | 20 |
| 21 | | | | | | | 0.28 | | | | | | 21 |
| 22 | | | | | 0.08 | | | | | | | | 22 |
| 23 | | | | | | 0.04 | | | | | | | 23 |
| 24 | | | | 0.46 | | | 0.09 | | | | | | 24 |
| 25 | | | | | | | | | | | | | 25 |
| 26 | | | | | | | 0.07 | | | | | | 26 |
| 27 | | | | | | | 0.46 | 0.03 | | | | | 27 |
| 28 | | | | | | | 0.05 | | | | | | 28 |
| 29 | | | | | 0.18 | 0.10 | | | | | | | 29 |
| 30 | | | | | 0.35 | | | | | | | | 30 |
| 31 | | | | | | | | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.10 | 1.06 | 0.56 | 0.40 | 0.55 | 0.38 | 0.17 | 0.00 | |

--LEGEND--

A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE

P - INCLUDED IN FOLLOWING TOTAL

REMARKS _____

SEASON TOTAL 4.22 "

| SEASON | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | TOTAL |
|-----------|------|------|-------|-------|-------|-------|--------|--------|-------|-------|------|------|--------|
| 1961-1962 | 0.00 | 0.04 | 0.02 | 0.08 | 1.13 | 1.81 | 2.49 | 6.16 | 0.98 | 0.00 | 0.34 | 0.02 | 13.07 |
| 1962-1963 | 0.00 | 0.00 | 0.00 | 0.07 | 0.02 | 0.00 | 0.01 | 2.47 | 1.52 | 1.61 | 0.00 | 0.06 | 5.76 |
| 1963-1964 | 0.00 | 0.03 | 2.16 | 0.43 | 3.11 | 0.01 | 1.37 | 0.00 | 1.37 | 0.60 | 0.02 | 0.28 | 9.38 |
| 1964-1965 | 0.00 | 0.00 | 0.43 | 0.09 | 1.13 | 1.32 | 0.76 | 0.21 | 1.19 | 5.13 | 0.00 | 0.02 | 10.28 |
| 1965-1966 | 0.12 | 0.00 | 0.35 | 0.00 | 6.20 | 3.70 | 0.67 | 1.40 | 0.15 | 0.05 | 0.04 | 0.00 | 12.68 |
| 1966-1967 | 0.00 | 0.00 | 0.01 | 0.06 | 1.69 | 5.45 | 2.52 | 0.00 | 1.35 | 3.12 | 0.02 | 0.00 | 14.22 |
| 1967-1968 | 0.00 | 0.00 | 1.03 | 0.00 | 2.63 | 1.69 | 0.67 | 0.35 | 1.57 | 0.52 | 0.12 | 0.00 | 8.58 |
| 1968-1969 | 0.07 | 0.00 | 0.00 | 0.22 | 0.40 | 1.25 | 7.63 | 8.51 | 0.88 | 0.87 | 0.07 | 0.01 | 19.91 |
| 1969-1970 | 0.05 | 0.00 | 0.00 | 0.00 | 2.69 | 0.33 | 1.71 | 0.91 | 2.79 | 0.00 | 0.00 | 0.00 | 8.48 |
| 1971-1972 | 0.00 | 0.00 | 0.01 | 0.17 | 0.17 | 3.99 | 0.00 | 0.06 | 0.01 | 0.12 | 0.18 | 0.31 | 5.02 |
| 1972-1973 | 0.00 | 0.32 | 0.06 | 0.22 | 2.84 | 1.69 | 3.29 | 3.83 | 2.57 | 0.03 | 0.04 | 0.01 | 14.90 |
| 1973-1974 | 0.00 | 0.00 | 0.02 | 0.01 | 1.54 | 0.24 | 4.17 | 0.04 | 3.24 | 0.42 | 0.13 | 0.00 | 9.81 |
| 1974-1975 | 0.00 | 0.00 | 0.00 | 0.70 | 0.08 | 3.85 | 0.29 | 1.74 | 3.48 | 2.16 | 0.06 | 0.00 | 12.36 |
| 1975-1976 | 0.00 | 0.00 | 0.00 | 0.21 | 0.00 | 0.08 | 0.00 | 1.95 | 1.28 | 1.09 | 0.06 | 0.44 | 5.11 |
| 1976-1977 | 0.00 | 0.00 | 1.78 | 0.00 | 0.60 | 0.67 | 2.89 | 1.08 | 0.97 | 0.00 | 2.21 | 0.00 | 10.20 |
| 1977-1978 | 0.00 | 2.10 | 0.00 | 0.00 | 3.66 | 8.27 | 5.18 | 6.79 | 1.81 | 0.15 | 0.00 | 0.00 | 27.96 |
| 1978-1979 | 0.00 | 0.00 | 1.99 | 0.05 | 1.92 | 1.84 | 4.55 | 2.94 | 5.28 | 0.02 | 0.00 | 0.00 | 18.59 |
| 1979-1980 | 0.00 | 0.00 | 0.00 | 0.57 | 0.52 | 0.12 | 7.77 | 7.97 | 3.19 | 0.31 | 0.30 | 0.00 | 20.75 |
| 1980-1981 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.48 | 2.57 | 1.85 | 3.08 | 0.48 | 0.00 | 8.47 |
| 1981-1982 | 0.00 | 0.00 | 0.00 | 0.76 | 1.96 | 0.78 | 2.61 | 1.32 | 4.40 | 1.18 | 0.19 | 0.02 | 13.22 |
| 1982-1983 | 0.00 | 0.00 | 1.28 | 0.12 | 3.53 | 1.14 | 3.10 | 4.19 | 8.72 | 3.39 | 0.45 | 0.00 | 25.92 |
| 1983-1984 | 0.00 | 1.56 | 0.83 | 1.46 | 3.55 | 2.13 | 0.12 | 0.00 | 0.19 | 0.60 | 0.00 | 0.03 | 10.47 |
| 1984-1985 | 0.00 | 0.15 | 0.37 | 0.09 | 1.79 | 4.56 | 0.60 | 2.02 | 0.59 | 0.03 | 0.05 | 0.00 | 10.25 |
| 1985-1986 | 0.00 | 0.00 | 0.47 | 0.04 | 2.87 | 0.35 | 0.63 | 5.96 | 3.03 | 1.07 | 0.00 | 0.00 | 14.42 |
| 1986-1987 | 0.09 | 0.00 | 1.04 | 0.24 | 0.69 | 1.03 | 1.85 | 2.34 | 1.08 | 0.36 | 0.07 | 0.00 | 8.79 |
| 1987-1988 | 0.06 | 0.14 | 0.46 | 2.29 | 1.00 | 2.47 | 1.22 | 0.74 | 0.42 | 2.34 | 0.00 | 0.00 | 11.14 |
| 1988-1989 | 0.00 | 0.10 | 0.09 | 0.00 | 1.00 | 4.03 | 0.49 | 1.49 | 0.86 | 0.08 | 0.03 | 0.00 | 8.17 |
| 1989-1990 | 0.00 | 0.00 | 0.00 | 0.35 | 0.20 | 0.00 | 2.14 | 2.79 | 0.45 | 0.00 | 0.00 | 0.00 | 5.93 |
| 1990-1991 | 0.00 | 0.01 | 0.00 | 0.00 | 0.53 | 0.05 | 1.32 | 3.00 | 6.24 | 0.08 | 0.00 | 0.00 | 11.23 |
| 1991-1992 | 0.00 | 0.00 | 0.00 | 0.20 | 0.00 | 1.59 | 2.50 | 5.97 | 6.78 | 0.13 | 0.01 | 0.00 | 17.18 |
| 1992-1993 | 0.15 | 0.00 | 0.00 | 0.94 | 0.00 | 4.63 | 12.48 | 6.03 | 1.50 | 0.00 | 0.00 | 1.36 | 27.09 |
| 1993-1994 | 0.00 | 0.00 | 0.00 | 0.18 | 0.70 | 0.89 | 0.69 | 4.14 | 2.35 | 0.96 | 0.28 | 0.04 | 10.23 |
| 1994-1995 | 0.00 | 0.05 | 0.00 | 0.13 | 1.25 | 1.08 | 11.17 | 1.47 | 6.72 | 0.92 | 0.90 | 0.06 | 24.65 |
| 1995-1996 | 0.08 | 0.00 | 0.00 | 0.00 | 0.71 | 2.47 | 5.20 | 2.07 | 0.64 | 0.00 | 0.00 | 0.00 | 11.17 |
| 1996-1997 | 0.00 | 0.00 | 1.29 | 5.24 | 4.04 | 5.44 | 0.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 16.19 |
| 1997-1998 | 0.00 | 0.00 | 0.84 | 0.00 | 2.65 | 6.18 | 2.84 | 14.85 | 3.44 | 1.42 | 2.50 | 0.00 | 34.72 |
| 1998-1999 | 0.00 | 0.00 | 0.36 | 0.00 | 1.42 | 1.58 | 2.19 | 0.52 | 1.19 | 1.34 | 0.00 | 0.00 | 8.60 |
| 1999-2000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.60 | 3.97 | 2.45 | 1.41 | 0.23 | 0.00 | 8.79 |
| 2000-2001 | 0.00 | 0.00 | 0.26 | 1.25 | 0.02 | 0.00 | 4.46 | 6.47 | 0.86 | 1.25 | 0.00 | 0.00 | 14.57 |
| 2001-2002 | 0.00 | 0.00 | 0.00 | 0.00 | 1.10 | 1.06 | 0.56 | 0.40 | 0.55 | 0.38 | 0.17 | 0.00 | 4.22 |
| Totals | 0.62 | 4.50 | 13.86 | 12.22 | 56.17 | 70.61 | 111.11 | 119.70 | 95.58 | 35.92 | 8.62 | 3.57 | 532.48 |
| Average | 0.02 | 0.11 | 0.35 | 0.31 | 1.40 | 1.77 | 2.78 | 2.99 | 2.39 | 0.90 | 0.22 | 0.09 | 13.31 |
| Max | 0.15 | 2.10 | 2.16 | 2.29 | 6.20 | 6.18 | 12.48 | 14.85 | 8.72 | 5.13 | 2.50 | 1.36 | 34.72 |

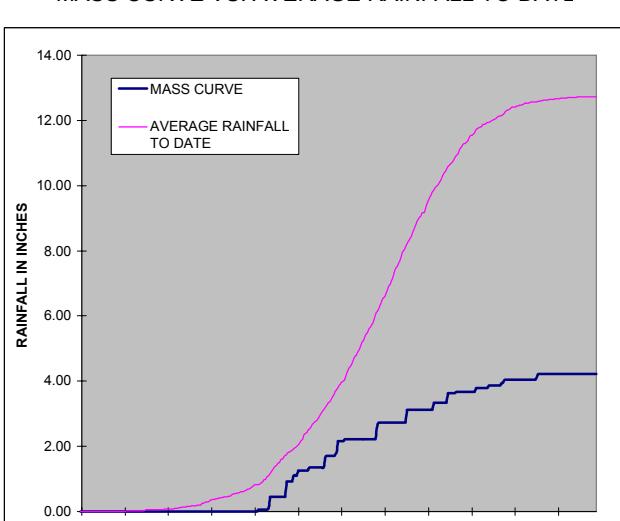
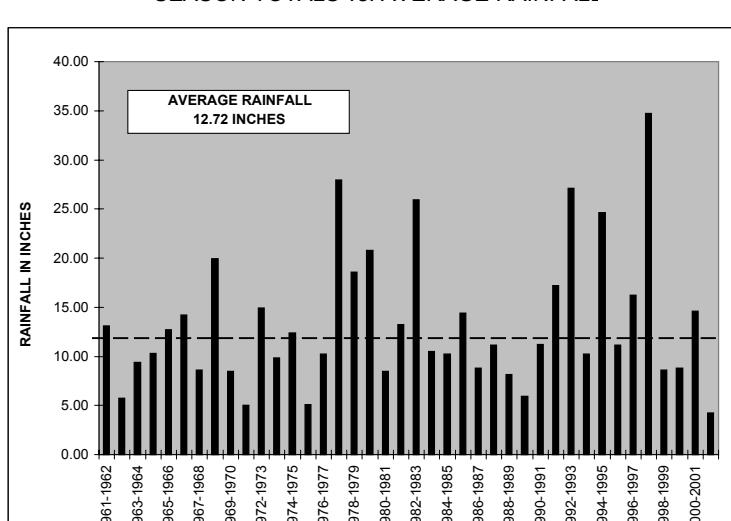


Table 7
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Newport Beach Harbor Master - Sta. 88

GAGE ELEVATION: 8'
 SEASON TOTAL: 3.55
 RECORDS: 1922 to Present
 MEAN: 11.41
 SEASON AS %: 31.1

| DAY | LATITUDE 33-36-16 LONGITUDE 117-53-00 40 YEAR BASE PERIOD: 1963-2002 | | | | | | | | | | | | SEASON AS %: |
|-----|--|------|------|------|------|------|------|------|------|------|------|------|--------------|
| | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | |
| 1 | | | | | | | 0.01 | | | | | 1 | |
| 2 | | | | | | | | | | | | 2 | |
| 3 | | | | 0.11 | 0.02 | | | | | | | 3 | |
| 4 | | | 0.08 | | | | | | | | | 4 | |
| 5 | | 0.01 | | | | | | | | | | 5 | |
| 6 | | | | | | | | | | | | 6 | |
| 7 | | | | | | 0.25 | | | | | | 7 | |
| 8 | | | | | | | | | | | | 8 | |
| 9 | | | | | | | | | | | | 9 | |
| 10 | | | 0.01 | | | | | | | | | 10 | |
| 11 | | 0.05 | | | | | | | | | | 11 | |
| 12 | | | | | | | | | | | | 12 | |
| 13 | | 0.73 | | | | | | | | | | 13 | |
| 14 | | 0.11 | | | | | | | | | | 14 | |
| 15 | | | | | 0.01 | | | | | | | 15 | |
| 16 | | | | | | | | | | | | 16 | |
| 17 | | | 0.47 | | | | | | | | | 17 | |
| 18 | | | | 0.16 | | | | | | | | 18 | |
| 19 | | | | | | | | | | | | 19 | |
| 20 | | | | | | | | | | | | 20 | |
| 21 | | | 0.15 | | | | | | | | | 21 | |
| 22 | | | | | | | | | | | | 22 | |
| 23 | | | | 0.10 | | | | | | | | 23 | |
| 24 | | 0.25 | | 0.01 | | | | | | | | 24 | |
| 25 | | | | | | | | | | | | 25 | |
| 26 | | | | | | | | | | | | 26 | |
| 27 | | | | | | | | | | | | 27 | |
| 28 | | | 0.08 | | | | | | | | | 28 | |
| 29 | | 0.56 | 0.13 | 0.01 | | | | | | | | 29 | |
| 30 | | | 0.08 | | | | | | | | | 30 | |
| 31 | | | 0.16 | | | | | | | | | 31 | |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.68 | 0.75 | 0.11 | 0.47 | 0.53 | 0.01 | 0.00 | 0.00 | |

--LEGEND--

A - ESTIMATED C - INCOMPLETE NR - NO RECORD

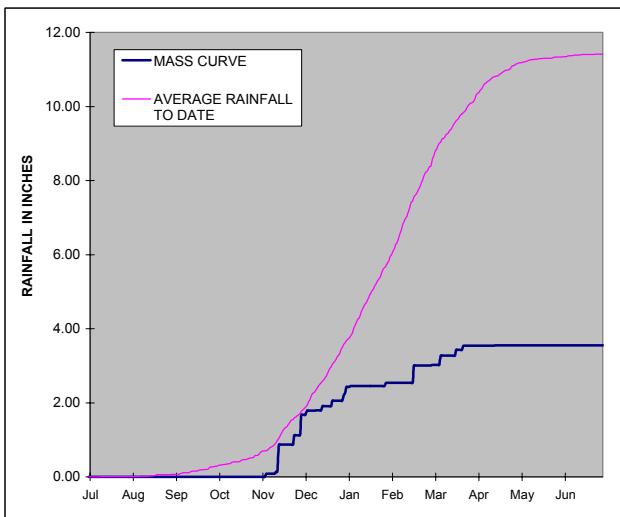
B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE

P - INCLUDED IN FOLLOWING TOTAL

REMARKS _____

SEASON TOTAL 3.55 "

MASS CURVE VS. AVERAGE RAINFALL TO DATE



SEASON TOTALS vs. AVERAGE RAINFALL

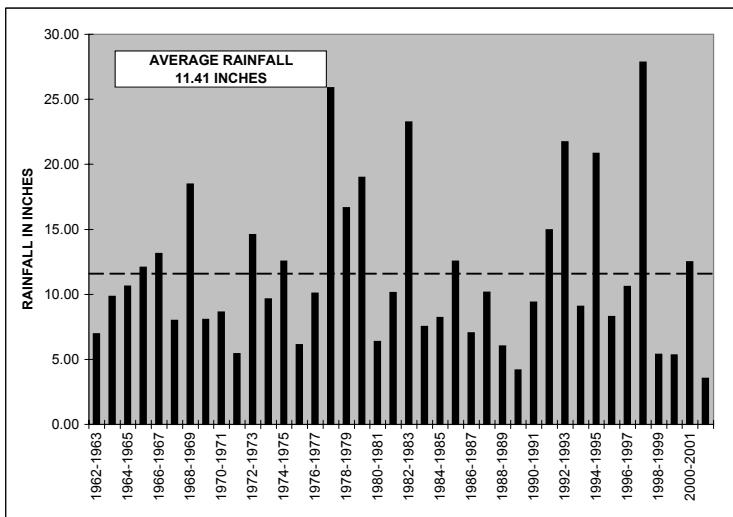


Table 8
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Fullerton Hillcrest Res. - Sta. 96

GAGE ELEVATION: 320' LATITUDE 33-53-00
 SEASON TOTAL: 4.88 LONGITUDE 117-55-12
 RECORDS: 1932 to Present 40 YEAR BASE PERIOD: * 1961-2002
 MEAN: * 14.33 MEAN: 14.34
 SEASON AS %: 34.1 SEASON AS %: 34.0

| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | 0.23 | 0.06 | | | | | | | 2 |
| 3 | | | T | | | | | | | | | | 3 |
| 4 | | | | 0.02 | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | 5 |
| 6 | | | | | | 0.11 | | | | | | | 6 |
| 7 | | | | | | | | | | | | | 7 |
| 8 | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | 11 |
| 12 | | | 0.37 | | | | | | | | | | 12 |
| 13 | | | | | | | | | | | | | 13 |
| 14 | | | 0.29 | | | | 0.13 | | | | | | 14 |
| 15 | | | | | | | | | | | | | 15 |
| 16 | | | | | 0.05 | | | | | | | | 16 |
| 17 | | | | | 0.14 | 0.21 | | | | | | | 17 |
| 18 | | | | | | | | | | | | | 18 |
| 19 | | | | | | | | | | | | | 19 |
| 20 | | | | 0.47 | | | | 0.22 | | | | | 20 |
| 21 | | | | | 0.02 | | | | | | | | 21 |
| 22 | | | | | | 0.12 | | | | | | | 22 |
| 23 | | | | | | 0.03 | | | | | | | 23 |
| 24 | | | 1.18 | | | | 0.08 | | | | | | 24 |
| 25 | | | | | | | | | | | | | 25 |
| 26 | | | | | | 0.05 | | | | | | | 26 |
| 27 | | | | | 0.48 | | | | | | | | 27 |
| 28 | | | | 0.09 | 0.09 | | 0.02 | | | | | | 28 |
| 29 | | | | 0.17 | 0.16 | | | | | | | | 29 |
| 30 | | | | | 0.09 | | | | | | | | 30 |
| 31 | | | T | | | | | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.74 | 1.35 | 0.63 | 0.19 | 0.49 | 0.26 | 0.22 | 0.00 | |

--LEGEND--

A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE

P - INCLUDED IN FOLLOWING TOTAL

REMARKS _____

SEASON TOTAL 4.88 "

| SEASON | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | TOTAL |
|-----------|------|------|-------|-------|-------|-------|--------|--------|-------|-------|------|------|--------|
| 1960-1961 | 0.00 | 0.00 | 0.00 | 0.50 | 1.97 | 0.14 | 1.18 | 0.01 | 0.43 | 0.04 | 0.00 | 0.00 | 4.27 |
| 1961-1962 | 0.02 | 0.00 | 0.00 | 0.00 | 1.27 | 1.79 | 2.45 | 9.12 | 0.74 | 0.00 | 0.43 | 0.00 | 15.82 |
| 1962-1963 | 0.00 | 0.00 | 0.00 | 0.06 | 0.01 | 0.02 | 0.21 | 4.45 | 2.30 | 1.26 | 0.00 | 0.26 | 8.57 |
| 1963-1964 | 0.00 | 0.04 | 2.27 | 0.41 | 3.20 | 0.00 | 1.15 | 0.05 | 1.72 | 0.50 | 0.12 | 0.16 | 9.62 |
| 1964-1965 | 0.00 | 0.00 | 0.00 | 0.39 | 1.42 | 1.56 | 0.59 | 0.18 | 2.24 | 4.45 | 0.04 | 0.03 | 10.90 |
| 1965-1966 | 0.03 | 0.00 | 1.07 | 0.00 | 7.60 | 3.55 | 0.91 | 1.37 | 0.49 | 0.02 | 0.02 | 0.00 | 15.06 |
| 1966-1967 | 0.00 | 0.00 | 0.11 | 0.01 | 3.13 | 5.18 | 4.10 | 0.00 | 1.75 | 3.09 | 0.02 | 0.03 | 17.42 |
| 1967-1968 | 0.00 | 0.00 | 0.68 | 0.00 | 4.31 | 1.62 | 1.14 | 0.53 | 3.11 | 0.58 | 0.05 | 0.00 | 12.02 |
| 1968-1969 | 0.11 | 0.00 | 0.00 | 0.22 | 0.33 | 1.54 | 11.84 | 9.61 | 1.42 | 0.70 | 0.08 | 0.02 | 25.87 |
| 1969-1970 | 0.12 | 0.00 | 0.00 | 0.00 | 2.10 | 0.18 | 2.34 | 2.28 | 2.09 | 0.00 | 0.00 | 0.04 | 9.15 |
| 1971-1972 | 0.00 | 0.00 | 0.00 | 0.48 | 0.21 | 5.47 | 0.00 | 0.06 | 0.00 | 0.28 | 0.07 | 0.41 | 6.98 |
| 1972-1973 | 0.00 | 0.00 | 0.11 | 0.81 | 4.22 | 1.67 | 2.99 | 5.51 | 3.68 | 0.00 | 0.00 | 0.00 | 18.99 |
| 1973-1974 | 0.00 | 0.00 | 0.01 | 0.13 | 1.80 | 0.59 | 7.11 | 0.18 | 3.54 | 0.28 | 0.19 | 0.00 | 13.83 |
| 1974-1975 | 0.00 | 0.00 | 0.00 | 0.66 | 0.05 | 3.66 | 0.15 | 2.62 | 4.05 | 1.69 | 0.02 | 0.00 | 12.90 |
| 1975-1976 | 0.00 | 0.00 | 0.00 | 0.36 | 0.36 | 0.19 | 0.00 | 3.48 | 1.64 | 1.59 | 0.08 | 0.41 | 8.11 |
| 1976-1977 | 0.02 | 0.00 | 2.77 | 0.02 | 0.57 | 0.98 | 1.69 | 0.74 | 1.17 | 0.00 | 2.32 | 0.01 | 10.29 |
| 1978-1979 | 0.00 | 0.00 | 1.13 | 0.19 | 1.96 | 2.09 | 5.64 | 2.64 | 4.45 | 0.00 | 0.00 | 0.00 | 18.10 |
| 1979-1980 | 0.00 | 0.00 | 0.00 | 1.02 | 0.33 | 3.9 | 8.88 | 10.79 | 4.14 | 0.48 | 0.22 | 0.00 | 26.25 |
| 1980-1981 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.91 | 2.80 | 1.80 | 3.71 | 0.41 | 0.06 | 0.00 | 9.63 |
| 1981-1982 | 0.00 | 0.00 | 0.00 | 0.95 | 3.54 | 0.53 | 3.13 | 0.60 | 6.13 | 0.66 | 0.15 | 0.03 | 15.72 |
| 1982-1983 | 0.00 | 0.01 | 0.55 | 0.29 | 3.65 | 1.60 | 3.95 | 6.01 | 7.65 | 3.73 | 0.02 | 0.02 | 27.48 |
| 1983-1984 | 0.00 | 1.06 | 2.46 | 0.98 | 3.78 | 2.04 | 0.38 | 0.00 | 0.14 | 0.67 | 0.00 | 0.00 | 11.51 |
| 1984-1985 | 0.00 | 0.08 | 0.32 | 0.12 | 2.39 | 5.70 | 1.37 | 1.62 | 1.23 | 0.03 | 0.13 | 0.00 | 12.99 |
| 1985-1986 | 0.00 | 0.00 | 0.41 | 0.27 | 4.21 | 0.32 | 2.38 | 5.29 | 3.60 | 0.62 | 0.00 | 0.00 | 17.10 |
| 1986-1987 | 0.20 | 0.00 | 1.84 | 0.33 | 0.95 | 0.28 | 3.56 | 1.07 | 1.11 | 0.22 | 0.00 | 0.01 | 9.57 |
| 1987-1988 | 0.01 | 0.17 | 0.00 | 2.00 | 0.61 | 2.09 | 1.82 | 1.21 | 0.05 | 2.51 | 0.00 | 0.00 | 10.47 |
| 1988-1989 | 0.00 | 0.00 | 0.13 | 0.00 | 1.17 | 4.74 | 0.62 | 1.69 | 1.17 | 0.02 | 0.00 | 0.04 | 9.58 |
| 1989-1990 | 0.00 | 0.00 | 0.36 | 0.53 | 0.29 | 0.00 | 1.82 | 4.04 | 0.17 | 0.82 | 0.66 | 0.04 | 8.73 |
| 1990-1991 | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 | 0.07 | 1.77 | 4.56 | 5.52 | 0.03 | 0.00 | 0.00 | 12.33 |
| 1991-1992 | 0.12 | 0.00 | 0.06 | 0.49 | 0.05 | 1.94 | 1.89 | 8.31 | 6.83 | 0.07 | 0.00 | 0.00 | 19.76 |
| 1992-1993 | 0.25 | 0.00 | 0.00 | 0.88 | 0.00 | 6.47 | 11.54 | 6.92 | 2.27 | 0.00 | 0.16 | 1.06 | 29.55 |
| 1993-1994 | 0.00 | 0.00 | 0.00 | 0.11 | 1.09 | 1.11 | 0.43 | 3.92 | 2.45 | 1.25 | 0.32 | 0.00 | 10.68 |
| 1994-1995 | 0.00 | 0.00 | 0.00 | 0.32 | 1.10 | 0.62 | 12.57 | 1.01 | 7.01 | 0.72 | 0.37 | 1.26 | 24.98 |
| 1995-1996 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 1.44 | 2.10 | 4.68 | 2.16 | 0.87 | 0.00 | 0.00 | 11.29 |
| 1996-1997 | 0.00 | 0.00 | 0.00 | 1.23 | 2.95 | 4.97 | 6.81 | 0.30 | 0.00 | 0.00 | 0.00 | 0.00 | 16.26 |
| 1997-1998 | 0.00 | 0.00 | 0.74 | 0.06 | 2.43 | 4.50 | 3.33 | 12.96 | 4.46 | 0.66 | 2.66 | 0.03 | 31.83 |
| 1998-1999 | 0.00 | 0.00 | 0.00 | 0.00 | 1.47 | 0.92 | 1.71 | 0.67 | 1.10 | 2.21 | 0.03 | 0.30 | 8.41 |
| 1999-2000 | 0.05 | 0.00 | 0.00 | 0.00 | 0.07 | 0.10 | 0.82 | 4.53 | 2.12 | 1.48 | 0.00 | 0.00 | 9.17 |
| 2000-2001 | 0.00 | 0.00 | 0.13 | 1.95 | 0.18 | 0.00 | 4.80 | 8.96 | 0.35 | 0.91 | 0.00 | 0.00 | 17.28 |
| 2001-2002 | 0.00 | 0.00 | 0.00 | 0.00 | 1.74 | 1.35 | 0.63 | 0.19 | 0.49 | 0.26 | 0.22 | 0.00 | 4.88 |
| Totals | 0.93 | 1.36 | 15.15 | 15.77 | 66.93 | 72.32 | 122.60 | 133.96 | 98.68 | 33.11 | 8.44 | 4.16 | 573.41 |
| Average | 0.02 | 0.03 | 0.38 | 0.39 | 1.67 | 1.81 | 3.07 | 3.35 | 2.47 | 0.83 | 0.21 | 0.10 | 14.34 |
| Max | 0.25 | 1.06 | 2.77 | 2.00 | 7.60 | 6.47 | 12.57 | 12.96 | 7.65 | 4.45 | 2.66 | 1.26 | 31.83 |

* 1970-1971 and 1977-1978 not included

SEASON TOTALS vs. AVERAGE RAINFALL

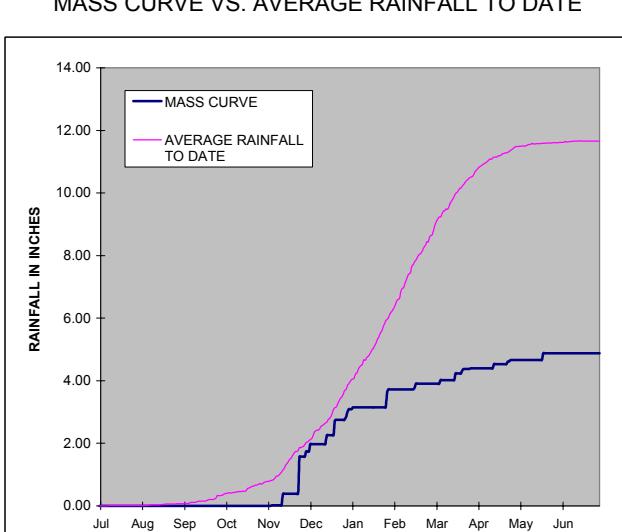
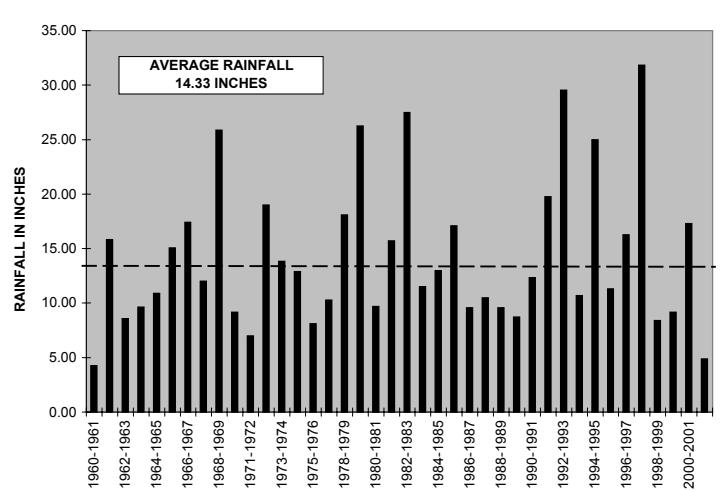


Table 9
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Laguna Beach Treatment Plant - Sta. 100

GAGE ELEVATION: 50'
 SEASON TOTAL: 4.93
 RECORDS: 1929 to Present
 MEAN: * 12.21
 SEASON AS %: 40.4

LATITUDE 33-32-49
 LONGITUDE 117-46-53
 40 YEAR BASE PERIOD: * 1960-2002
 MEAN: 13.15
 SEASON AS %: 37.5

| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | 2 |
| 3 | | | | | | | | | | | | | 3 |
| 4 | T | | | 0.10 | | | | | | | | | 4 |
| 5 | | | | 0.05 | 0.10 | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | | | 7 |
| 8 | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | 0.05 | 9 |
| 10 | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | 11 |
| 12 | | | | | | | | | | | | | 12 |
| 13 | | | | | | | | | | | | | 13 |
| 14 | | | | | | | | | | | | | 14 |
| 15 | | | | | | | | | | | | 0.04 | 15 |
| 16 | | | | | | | | | | | | | 16 |
| 17 | | | | | | | | | | | | | 0.30 |
| 18 | | | | | | | | | | | | | 0.57 |
| 19 | | | | | | | | | | | | | 0.10 |
| 20 | | | | | | | | | | | | | 0.10 |
| 21 | | | | | | | | | | | | | 0.59 |
| 22 | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | 0.20 |
| 24 | | | | | | | | | | | | | 0.50 |
| 25 | | | | | | | | | | | | | 0.30 |
| 26 | | | | | | | | | | | | | 0.01 |
| 27 | | | | | | | | | | | | | |
| 28 | | | | | | | | | | | | | 0.30 |
| 29 | | | | | | | | | | | | | 0.10 |
| 30 | | | | | | | | | | | | | 0.31 |
| 31 | | | | | | | | | | | | | |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.61 | 1.35 | 0.30 | 0.30 | 1.07 | 0.15 | 0.10 | 0.05 | |

--LEGEND--

A - ESTIMATED C - INCOMPLETE NR - NO RECORD

B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE

P - INCLUDED IN FOLLOWING TOTAL

REMARKS _____

SEASON TOTAL 4.93 "

| SEASON | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | TOTAL |
|-----------|------|------|-------|-------|-------|-------|--------|--------|-------|-------|------|------|--------|
| 1959-1960 | 0.02 | 0.00 | 0.00 | 0.00 | | 0.27 | 1.81 | 2.76 | 2.72 | 0.53 | 1.83 | 0.11 | 0.03 |
| 1960-1961 | 0.00 | 0.00 | 0.00 | 0.00 | 2.33 | 0.41 | 0.67 | 0.00 | 0.71 | 0.00 | 0.00 | 0.00 | 4.12 |
| 1961-1962 | 0.00 | 0.02 | 0.10 | 0.13 | 0.74 | 2.04 | 2.25 | 6.95 | 0.78 | 0.00 | 0.73 | 0.10 | 13.84 |
| 1962-1963 | 0.00 | 0.00 | 0.00 | 0.05 | 0.04 | 0.02 | 0.09 | 4.61 | 1.84 | 1.59 | 0.02 | 0.13 | 8.39 |
| 1963-1964 | 0.00 | 0.00 | 2.28 | 0.37 | 4.31 | 0.03 | 0.82 | 0.11 | 0.98 | 0.23 | 0.07 | 0.52 | 9.72 |
| 1964-1965 | 0.00 | 0.00 | 0.41 | 0.14 | 0.98 | 1.92 | 0.58 | 0.43 | 1.59 | 4.10 | 0.00 | 0.06 | 10.21 |
| 1965-1966 | 0.03 | 0.00 | 0.26 | 0.00 | 6.50 | 5.08 | 0.95 | 0.94 | 0.40 | 0.01 | 0.13 | 0.00 | 14.30 |
| 1967-1968 | 0.00 | 0.00 | 0.21 | 0.00 | 1.71 | 1.33 | 0.82 | 0.32 | 1.87 | 0.70 | 0.15 | 0.00 | 7.11 |
| 1968-1969 | 0.18 | 0.00 | 0.00 | 0.22 | 0.52 | 1.03 | 8.00 | 9.06 | 1.31 | 0.80 | 0.18 | 0.17 | 21.47 |
| 1969-1970 | 0.10 | 0.00 | 0.00 | 0.00 | 2.63 | 0.10 | 2.13 | 0.18 | 2.56 | 0.02 | 0.00 | 0.38 | 8.10 |
| 1970-1971 | 0.00 | 0.00 | 0.00 | 0.08 | 2.73 | 2.87 | 0.76 | 0.48 | 0.26 | 0.67 | 0.85 | 0.09 | 8.79 |
| 1971-1972 | 0.00 | 0.00 | 0.00 | 0.33 | 0.16 | 3.72 | 0.02 | 0.12 | 0.03 | 0.02 | 0.37 | 0.00 | 4.77 |
| 1972-1973 | 0.00 | 0.19 | 0.08 | 0.38 | 3.82 | 1.14 | 3.57 | 4.00 | 3.57 | 0.10 | 0.10 | 0.05 | 17.00 |
| 1973-1974 | 0.00 | 0.00 | 0.00 | 0.04 | 1.55 | 0.32 | 3.36 | 0.15 | 4.11 | 0.38 | 0.11 | 0.10 | 10.12 |
| 1974-1975 | 0.00 | 0.00 | 0.00 | 0.49 | 0.29 | 3.46 | 2.03 | 2.18 | 3.67 | 2.78 | 0.00 | | 14.90 |
| 1975-1976 | 0.00 | 0.00 | 0.00 | 1.15 | 0.58 | 0.34 | 0.00 | 3.28 | 1.66 | 1.58 | 0.00 | 0.93 | 9.52 |
| 1976-1977 | 0.00 | 0.00 | 1.93 | 0.73 | 0.21 | 0.69 | 2.99 | 0.90 | 1.10 | 0.00 | 1.76 | 0.00 | 10.31 |
| 1977-1978 | 0.00 | 2.47 | 0.25 | 0.00 | 0.00 | 2.76 | 7.52 | 5.11 | 7.00 | 2.17 | 0.01 | 0.00 | 27.29 |
| 1978-1979 | 0.00 | 0.00 | 2.15 | 0.00 | 2.53 | 1.35 | 5.25 | 2.48 | 2.83 | 0.00 | 0.00 | | 16.59 |
| 1979-1980 | 0.00 | 0.00 | 0.00 | 0.00 | 1.05 | 0.27 | 8.51 | 8.59 | 2.68 | 0.64 | 0.20 | 0.00 | 21.94 |
| 1980-1981 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 1.08 | 0.59 | 1.17 | 4.33 | 0.33 | 0.07 | 0.00 | 7.58 |
| 1981-1982 | 0.00 | 0.00 | 0.00 | 14.9 | 2.22 | 0.65 | 3.37 | 0.82 | 3.88 | 0.90 | 0.48 | 0.09 | 13.90 |
| 1982-1983 | 0.00 | 0.00 | 1.54 | 0.11 | 3.22 | 1.12 | 2.48 | 4.28 | 8.81 | 3.52 | 0.22 | 0.00 | 25.30 |
| 1983-1984 | 0.00 | 0.49 | 1.10 | 1.01 | 2.85 | 2.39 | 0.11 | 0.00 | 0.23 | 0.04 | 0.00 | 0.23 | 8.45 |
| 1984-1985 | 0.06 | 0.13 | 0.44 | 0.49 | 2.42 | 4.14 | 1.13 | 1.25 | 0.62 | 0.00 | 0.06 | 0.00 | 10.74 |
| 1985-1986 | 0.00 | 0.00 | 0.13 | 0.25 | 3.81 | 0.48 | 1.12 | 2.31 | 3.38 | 1.20 | 0.00 | | 12.68 |
| 1986-1987 | 0.07 | 0.00 | 1.14 | 0.31 | 0.64 | 0.98 | 2.50 | 2.19 | 1.30 | 0.23 | 0.24 | 0.01 | 9.61 |
| 1987-1988 | 0.28 | 0.16 | 0.00 | 1.79 | 0.73 | 2.41 | 1.40 | 1.02 | 0.27 | 2.40 | 0.02 | 0.00 | 10.48 |
| 1990-1991 | 0.00 | 0.00 | 0.00 | 0.00 | 0.85 | 0.18 | 0.94 | 3.40 | 3.59 | 0.06 | 0.00 | | 9.02 |
| 1991-1992 | 0.01 | 0.00 | 0.00 | 0.04 | 0.00 | 1.94 | 1.52 | 6.34 | 5.86 | 0.20 | 0.00 | | 15.91 |
| 1992-1993 | 0.58 | 0.00 | 0.00 | 0.79 | 0.06 | 4.95 | 7.84 | 5.65 | 1.90 | 0.00 | 0.00 | | 22.65 |
| 1993-1994 | 0.01 | 0.00 | 0.00 | 0.16 | 1.13 | 0.81 | 0.88 | 3.42 | 2.42 | 0.65 | 0.35 | 0.00 | 9.83 |
| 1994-1995 | 0.00 | 0.00 | 0.00 | 0.35 | 0.45 | 1.33 | 8.20 | 2.20 | 6.04 | 1.30 | 0.00 | 0.60 | 20.47 |
| 1995-1996 | 0.00 | 0.00 | 0.00 | 0.09 | 0.05 | 2.44 | 5.01 | 1.42 | 0.22 | 0.00 | | | 10.23 |
| 1996-1997 | 0.50 | 0.00 | 0.00 | 1.60 | 3.20 | 5.06 | 5.57 | 0.27 | 0.00 | 0.00 | 0.00 | | 16.20 |
| 1997-1998 | 0.00 | 0.00 | 0.55 | 0.00 | 2.97 | 7.60 | 2.83 | 14.12 | 3.64 | 2.02 | 1.17 | 0.18 | 35.08 |
| 1998-1999 | 0.00 | 0.00 | 0.60 | 0.04 | 1.57 | 1.62 | 2.23 | 0.51 | 1.40 | 1.33 | 0.00 | 0.30 | 9.60 |
| 1999-2000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.18 | 0.00 | 0.52 | 3.59 | 2.90 | 1.02 | 0.00 | | 8.21 |
| 2000-2001 | 0.00 | 0.00 | 0.19 | 2.19 | 0.12 | 0.00 | 4.41 | 6.84 | 0.93 | 1.51 | 0.30 | 0.20 | 16.69 |
| 2001-2002 | 0.00 | 0.00 | 0.00 | 1.61 | 1.35 | 0.30 | 0.30 | 1.07 | 0.15 | 0.10 | 0.05 | | 4.93 |
| Totals | 1.84 | 3.46 | 13.36 | 14.74 | 61.07 | 69.83 | 103.46 | 117.30 | 93.47 | 34.70 | 7.80 | 5.10 | 526.13 |
| Average | 0.05 | 0.09 | 0.33 | 0.37 | 1.53 | 1.75 | 2.59 | 2.93 | 2.34 | 0.87 | 0.20 | 0.13 | 13.15 |
| Max | 0.58 | 2.47 | 2.28 | 2.19 | 6.50 | 7.60 | 8.51 | 14.12 | 8.81 | 4.10 | 1.76 | 0.93 | 35.08 |

* 1966-1967, 1988-1989, 1989-1990 not included

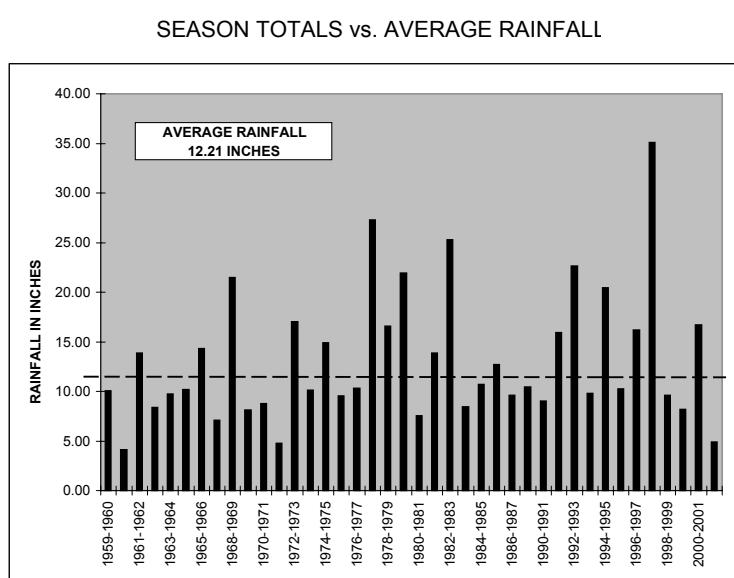
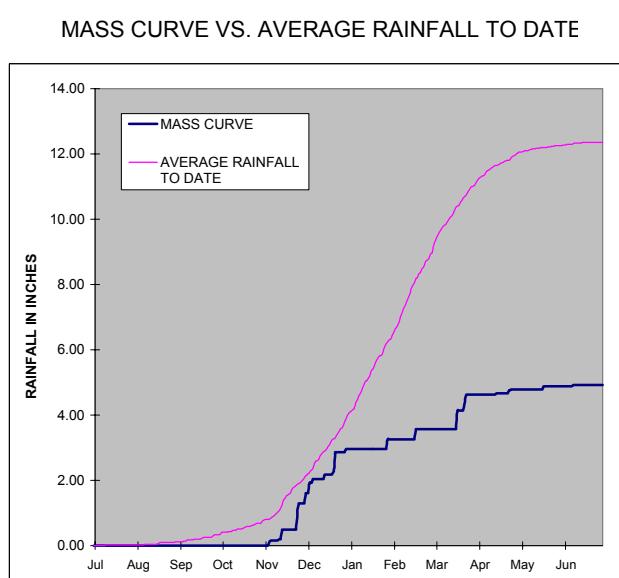


Table 10
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Santa Ana - Sta. 121

GAGE ELEVATION: 80' LATITUDE 33-45-46
 SEASON TOTAL: 3.82 LONGITUDE 117-36-00
 RECORDS: 1909 to Present 40 YEAR BASE PERIOD: 1963-2002
 MEAN: 13.01 MEAN: 13.17
 SEASON AS %: 29.4 SEASON AS %: 29.0

| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | 2 |
| 3 | | | | | | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | | | 7 |
| 8 | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | 11 |
| 12 | | | | | | | | | | | | | 12 |
| 13 | | | | | | | | | | | | | 13 |
| 14 | | | | | | | | | | | | | 14 |
| 15 | | | | | | | | | | | | | 15 |
| 16 | | | | | | | | | | | | | 16 |
| 17 | | | | | | | P | | | | | | 17 |
| 18 | | | | | | | 0.24 | 0.12 | | | | | 18 |
| 19 | | | | | | | | | | | | | 19 |
| 20 | | | | | | | | | | | | | 20 |
| 21 | | | | | | | 0.24 | | | | | | 21 |
| 22 | | | | | | | 0.02 | | | | | | 22 |
| 23 | | | | | | | | P | | | | | 23 |
| 24 | | | | | | | 0.13 | | | | | | 24 |
| 25 | | | | | | | 0.54 | | | | | | 25 |
| 26 | | | | | | | | | | | | | 26 |
| 27 | | | | | | | | 0.02 | | | | | 27 |
| 28 | | | | | | | 0.52 | | | | | | 28 |
| 29 | | | | | | | 0.08 | | | | | | 29 |
| 30 | | | | | | | 0.19 | 0.45 | | | | | 30 |
| 31 | | | | | | | 0.05 | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.15 | 1.05 | 0.60 | 0.24 | 0.48 | 0.24 | 0.06 | 0.00 | |

--LEGEND--

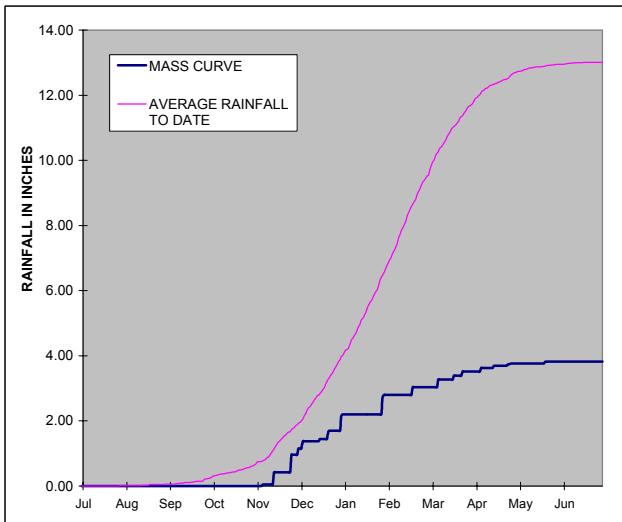
A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE

P - INCLUDED IN FOLLOWING TOTAL

REMARKS _____

SEASON TOTAL 3.82 "

MASS CURVE VS. AVERAGE RAINFALL TO DATE



SEASON TOTALS vs. AVERAGE RAINFALL

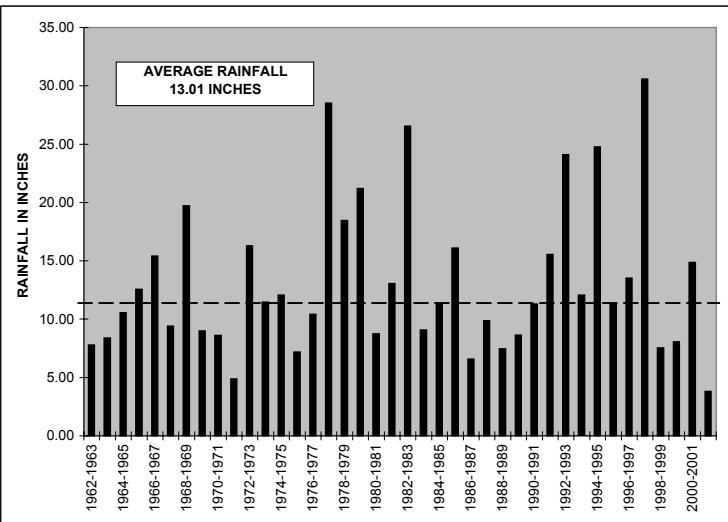


Table 11
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Yorba Reservoir - Sta.163

GAGE ELEVATION: 394' LATITUDE 33-52-19
 SEASON TOTAL: 4.85 LONGITUDE 117-48-37
 RECORDS: 1956 to Present 40 YEAR BASE PERIOD: * 1962-2002
 MEAN: * 14.25 MEAN: 14.65
 SEASON AS %: 34.0 SEASON AS %: 33.1

| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
|-----|------|------|------|------|------|-------|------|------|------|------|------|------|-----|
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | 2 |
| 3 | | | | | 0.16 | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | 4 |
| 5 | | | | | 0.05 | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | 6 |
| 7 | | | | | | | 0.07 | | | | | | 7 |
| 8 | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | 9 |
| 10 | | | | | 0.05 | | | | | | | | 10 |
| 11 | | | 0.02 | | | | | | | | | | 11 |
| 12 | | 0.01 | | | | | | | | | | | 12 |
| 13 | | | 0.36 | | | | | | | | | | 13 |
| 14 | | | | | | | | | | | | | 14 |
| 15 | | | 0.32 | | | *0.04 | | | | | | | 15 |
| 16 | | | | | | *0.04 | | | | | | | 16 |
| 17 | | | | | | | | | | | | | 17 |
| 18 | | | | 0.16 | 0.09 | | | | | | | | 18 |
| 19 | | | | | | 0.04 | | | | | | | 19 |
| 20 | | | | | | | | | | | | | 20 |
| 21 | | | 0.18 | | | 0.16 | | | | | | | 21 |
| 22 | | | 0.06 | | | | | | | | | | 22 |
| 23 | | | | | 0.12 | | | | | | | | 23 |
| 24 | | | | | | | | | | | | | 24 |
| 25 | | | 1.31 | | | 0.06 | | | | | | | 25 |
| 26 | | | | | | 0.21 | | | | | | | 26 |
| 27 | | | | | | 0.08 | | | | | | | 27 |
| 28 | | | | | 0.64 | | | | | | | | 28 |
| 29 | | | | | 0.11 | | | | | | | | 29 |
| 30 | | | | 0.20 | 0.26 | | | | | | | | 30 |
| 31 | | | | | 0.05 | | | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.95 | 1.08 | 0.75 | 0.16 | 0.28 | 0.43 | 0.20 | 0.00 | |

--LEGEND--

A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE

P - INCLUDED IN FOLLOWING TOTAL

REMARKS * Data from ALERT 1165

SEASON TOTAL 4.85 "

| SEASON | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | TOTAL |
|-----------|------|------|------|-------|-------|-------|--------|--------|--------|-------|------|-------|--------|
| 1961-1962 | 0.00 | 0.04 | 0.01 | 0.16 | 1.03 | 2.31 | 2.82 | 6.56 | 1.07 | 0.01 | 0.41 | 0.01 | 14.43 |
| 1962-1963 | 0.00 | 0.00 | 0.00 | 0.08 | 0.03 | 0.05 | 0.21 | 4.85 | 2.15 | 1.57 | 0.00 | 0.03 | 8.97 |
| 1963-1964 | 0.00 | 0.18 | 2.30 | 0.85 | 3.25 | 0.00 | 1.44 | 0.00 | 1.65 | 0.53 | 0.04 | 0.11 | 10.35 |
| 1964-1965 | 0.00 | 0.00 | 0.03 | 0.14 | 1.34 | 1.28 | 0.50 | 0.55 | 1.67 | 5.16 | 0.00 | 0.02 | 10.69 |
| 1965-1966 | 0.10 | 0.00 | 1.01 | 0.00 | 7.35 | 3.81 | 0.80 | 1.92 | 0.27 | 0.00 | 0.03 | 0.00 | 15.29 |
| 1966-1967 | 0.00 | 0.00 | 0.02 | 0.03 | 2.33 | 6.77 | 3.76 | 0.00 | 2.13 | 3.60 | 0.02 | 0.00 | 18.66 |
| 1967-1968 | 0.00 | 0.00 | 0.30 | 0.00 | 2.64 | 2.24 | 0.78 | 0.54 | 3.14 | 0.63 | 0.06 | 0.00 | 10.33 |
| 1968-1969 | 0.35 | 0.00 | 0.00 | 0.23 | 0.41 | 1.59 | 12.99 | 9.36 | 1.09 | 0.76 | 0.06 | 0.00 | 26.84 |
| 1969-1970 | 0.00 | 0.00 | 0.00 | 0.00 | 2.11 | 0.17 | 2.12 | 1.16 | 3.09 | 0.03 | 0.00 | 0.00 | 8.68 |
| 1970-1971 | 0.00 | 0.00 | 0.00 | 0.00 | 3.48 | 3.33 | 0.52 | 0.64 | 0.36 | 0.23 | 0.24 | 0.00 | 8.80 |
| 1971-1972 | 0.00 | 0.00 | 0.00 | 0.18 | 0.28 | 6.10 | 0.00 | 0.13 | 0.00 | 0.35 | 0.07 | 0.05 | 7.16 |
| 1972-1973 | 0.00 | 0.21 | 0.11 | 0.30 | 3.53 | 1.85 | 3.15 | 5.72 | 3.43 | 0.00 | 0.00 | 0.03 | 18.33 |
| 1973-1974 | 0.00 | 0.00 | 0.00 | 0.01 | 1.82 | 0.45 | 6.20 | 0.03 | 3.65 | 0.36 | 0.28 | 0.00 | 12.80 |
| 1974-1975 | 0.00 | 0.00 | 0.00 | 0.54 | 0.00 | 3.91 | 0.17 | 2.37 | 3.44 | 1.62 | 0.00 | 0.00 | 12.05 |
| 1975-1976 | 0.00 | 0.00 | 0.00 | 0.34 | 0.34 | 0.00 | 3.37 | 1.54 | 0.97 | 0.07 | 0.47 | 0.745 | |
| 1976-1977 | 0.00 | 0.00 | 2.01 | 0.00 | 0.53 | 0.00 | 3.69 | 0.82 | 1.33 | 0.00 | 2.20 | 0.00 | 10.58 |
| 1977-1978 | 0.00 | 2.39 | 0.00 | 0.00 | 4.36 | 7.93 | 8.32 | 8.12 | 1.67 | 0.02 | 0.00 | 0.00 | 32.81 |
| 1978-1979 | 0.00 | 0.00 | 1.18 | 0.08 | 1.76 | 2.65 | 6.82 | 3.42 | 6.11 | 0.00 | 0.05 | 0.00 | 22.07 |
| 1979-1980 | 0.00 | 0.00 | 0.00 | 1.03 | 0.32 | 0.42 | 8.86 | 11.45 | 4.19 | 0.32 | 0.05 | 0.00 | 26.64 |
| 1980-1981 | 0.00 | 0.00 | 0.00 | 0.00 | 0.67 | 3.02 | 1.47 | 3.74 | 0.51 | 0.04 | 0.00 | 0.00 | 9.45 |
| 1981-1982 | 0.00 | 0.00 | 0.00 | 0.64 | 2.23 | 0.53 | 3.38 | 6.63 | 1.12 | 0.14 | 0.00 | 0.00 | 15.63 |
| 1982-1983 | 0.00 | 0.00 | 0.32 | 0.30 | 4.48 | 1.95 | 3.76 | 5.20 | 9.70 | 3.03 | 0.41 | 0.00 | 29.15 |
| 1983-1984 | 0.00 | 0.39 | 0.49 | 3.30 | 3.21 | 1.95 | 0.27 | 0.00 | 0.06 | 0.49 | 0.00 | 0.00 | 10.16 |
| 1984-1985 | 0.00 | 0.04 | 0.28 | 0.14 | 2.44 | 5.92 | 1.30 | 1.71 | 0.84 | 0.01 | 0.08 | 0.00 | 12.76 |
| 1985-1986 | 0.00 | 0.00 | 0.10 | 0.21 | 4.44 | 0.43 | 1.51 | 4.99 | 3.41 | 0.91 | 0.00 | 0.00 | 16.00 |
| 1986-1987 | 0.00 | 0.02 | 0.00 | 1.73 | 1.54 | 0.36 | 1.71 | 1.12 | 0.82 | 0.22 | 0.00 | 0.00 | 7.52 |
| 1987-1988 | 0.00 | 0.00 | 0.00 | 2.34 | 0.58 | 2.79 | 1.86 | 0.65 | 0.28 | 2.11 | 0.00 | 0.00 | 10.61 |
| 1988-1989 | 0.00 | 0.00 | 0.44 | 0.39 | 0.39 | 0.00 | 2.18 | 3.72 | 0.22 | 0.00 | 0.00 | 0.00 | 7.34 |
| 1989-1990 | 0.00 | 0.00 | 0.00 | 0.00 | 0.36 | 0.12 | 1.76 | 2.80 | 6.32 | 0.08 | 0.00 | 0.00 | 11.44 |
| 1990-1991 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.75 | 2.16 | 7.12 | 5.72 | 0.40 | 0.00 | 0.00 | 17.15 |
| 1991-1992 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.51 | 6.10 | 1.45 | 0.00 | 0.00 | 1.20 | 26.42 |
| 1992-1993 | 0.06 | 0.00 | 0.00 | 0.60 | 0.00 | 4.77 | 12.24 | 6.10 | 1.45 | 0.00 | 0.00 | 0.00 | |
| 1993-1994 | 0.00 | 0.00 | 0.00 | 0.00 | 1.06 | 0.89 | 0.42 | 4.67 | 2.11 | 1.73 | 0.43 | 0.00 | 11.31 |
| 1994-1995 | 0.00 | 0.00 | 0.00 | 0.05 | 0.74 | 0.94 | 12.37 | 1.11 | 7.66 | 0.74 | 0.25 | 0.17 | 25.03 |
| 1995-1996 | 0.04 | 0.00 | 0.00 | 0.00 | 0.06 | 0.91 | 1.10 | 5.30 | 2.36 | 0.55 | 0.00 | 0.00 | 10.32 |
| 1996-1997 | 0.00 | 0.00 | 0.00 | 1.30 | 3.55 | 4.72 | 5.55 | 0.32 | 0.00 | 0.00 | 0.00 | 0.00 | 15.44 |
| 1997-1998 | 0.00 | 0.00 | 0.75 | 0.00 | 1.73 | 4.78 | 2.93 | 12.28 | 2.91 | 1.23 | 3.31 | 0.00 | 29.92 |
| 1998-1999 | 0.00 | 0.00 | 0.00 | 0.00 | 1.51 | 0.96 | 1.43 | 0.56 | 0.85 | 1.80 | 0.00 | 0.15 | 7.26 |
| 1999-2000 | 0.15 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.68 | 4.84 | 2.05 | 1.43 | 0.05 | 0.00 | 9.25 |
| 2000-2001 | 0.00 | 0.00 | 0.07 | 1.19 | 0.18 | 0.00 | 3.98 | 8.78 | 0.91 | 0.75 | 0.05 | 0.04 | 15.95 |
| 2001-2002 | 0.00 | 0.00 | 0.00 | 1.95 | 1.08 | 0.75 | 0.16 | 0.28 | 0.43 | 0.20 | 0.00 | 0.00 | 4.85 |
| Totals | 0.70 | 3.27 | 9.42 | 16.16 | 63.05 | 77.16 | 127.12 | 135.07 | 106.75 | 35.35 | 8.56 | 3.28 | 585.89 |
| Average | 0.02 | 0.08 | 0.24 | 0.40 | 1.58 | 1.93 | 3.18 | 3.38 | 2.67 | 0.88 | 0.21 | 0.08 | 14.65 |
| Max | 0.35 | 2.39 | 2.30 | 3.30 | 7.35 | 6.77 | 12.99 | 12.28 | 9.70 | 5.16 | 3.31 | 1.20 | 32.81 |

* 1988-1989 not included

SEASON TOTALS vs. AVERAGE RAINFALL

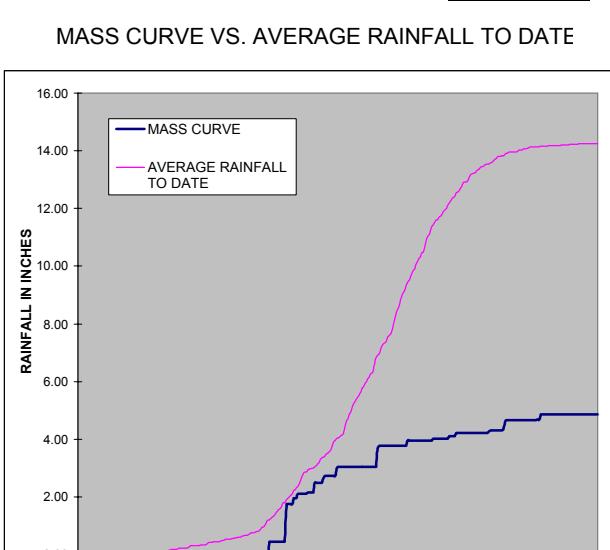
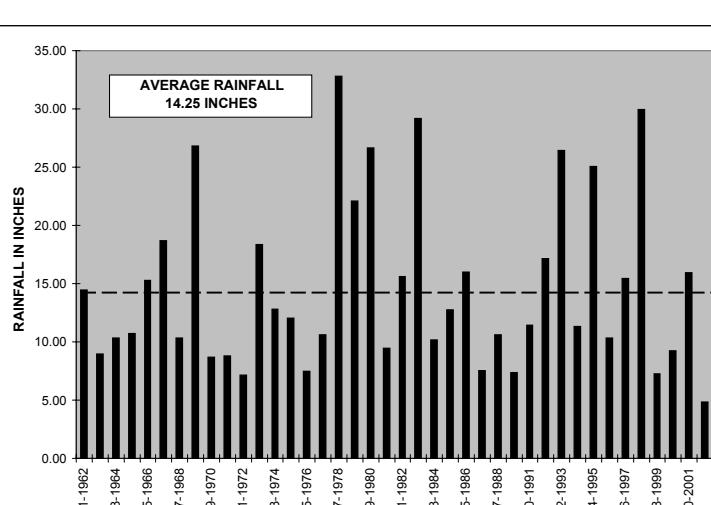


Table 12
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Costa Mesa - Sta. 165

GAGE ELEVATION: 53' LATITUDE 33-40-07
 SEASON TOTAL: 4.27 LONGITUDE 117-53-35
 RECORDS: 1956 to Present 40 YEAR BASE PERIOD: * 1962-2002
 MEAN: * 12.15 MEAN: 12.52
 SEASON AS %: 35.1 SEASON AS %: 34.1

| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | 2 |
| 3 | | | | | | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | | | 7 |
| 8 | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | 11 |
| 12 | | | | | | | | | | | | | 12 |
| 13 | | | | | | | | | | | | | 13 |
| 14 | | | | | | | | | | | | | 14 |
| 15 | | | | | | | | | | | | | 15 |
| 16 | | | | | | | | | | | | | 16 |
| 17 | | | | | | | | | | | | | 17 |
| 18 | | | | | | | | | | | | | 18 |
| 19 | | | | | | | | | | | | | 19 |
| 20 | | | | | | | | | | | | | 20 |
| 21 | | | | | | | | | | | | | 21 |
| 22 | | | | | | | | | | | | | 22 |
| 23 | | | | | | | | | | | | | 23 |
| 24 | | | | | | | | | | | | | 24 |
| 25 | | | | | | | | | | | | | 25 |
| 26 | | | | | | | | | | | | | 26 |
| 27 | | | | | | | | | | | | | 27 |
| 28 | | | | | | | | | | | | | 28 |
| 29 | | | | | | | | | | | | | 29 |
| 30 | | | | | | | | | | | | | 30 |
| 31 | | | | | | | | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.23 | 1.13 | 0.49 | 0.35 | 0.77 | 0.27 | 0.03 | 0.00 | |

--LEGEND--

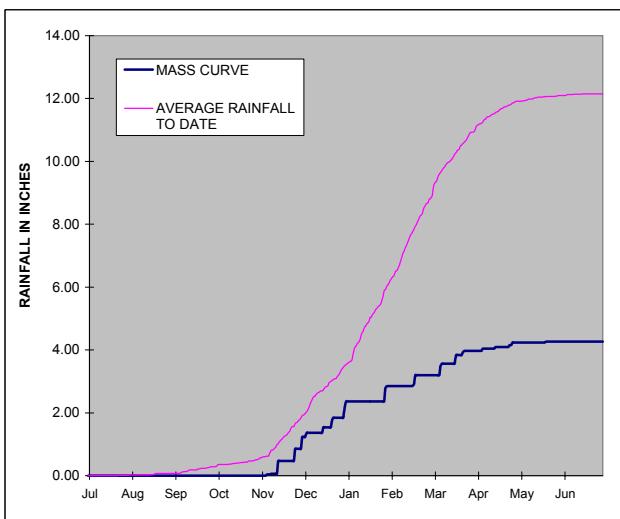
A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE

P - INCLUDED IN FOLLOWING TOTAL

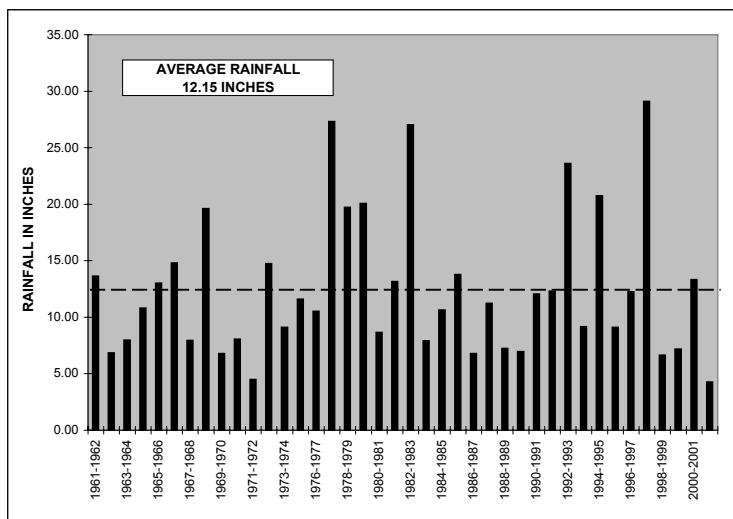
REMARKS _____

SEASON TOTAL 4.27 "

MASS CURVE VS. AVERAGE RAINFALL TO DATE



SEASON TOTALS vs. AVERAGE RAINFALL



* 1975-1976 not included

Table 13
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Corona Del Mar - Sta. 169

GAGE ELEVATION: 300' LATITUDE 33-36-35
 SEASON TOTAL: 3.94 LONGITUDE 117-51-27
 RECORDS: 1960 to Present 40 YEAR BASE PERIOD: * 1962-2002
 MEAN: * 12.55 MEAN: 12.90
 SEASON AS %: 31.4 SEASON AS %: 30.5

| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | 2 |
| 3 | | | | | | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | | | 7 |
| 8 | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | 11 |
| 12 | | | | | | | | | | | | | 12 |
| 13 | | | | | | | | | | | | | 13 |
| 14 | | | | | | | | | | | | | 14 |
| 15 | | | | | | | | | | | | | 15 |
| 16 | | | | | | | | | | | | | 16 |
| 17 | | | | | | | | | | | | | 17 |
| 18 | | | | | | | | | | | | | 18 |
| 19 | | | | | | | | | | | | | 19 |
| 20 | | | | | | | | | | | | | 20 |
| 21 | | | | | | | | | | | | | 21 |
| 22 | | | | | | | | | | | | | 22 |
| 23 | | | | | | | | | | | | | 23 |
| 24 | | | | | | | | | | | | | 24 |
| 25 | | | | | | | | | | | | | 25 |
| 26 | | | | | | | | | | | | | 26 |
| 27 | | | | | | | | | | | | | 27 |
| 28 | | | | | | | | | | | | | 28 |
| 29 | | | | | | | | | | | | | 29 |
| 30 | | | | | | | | | | | | | 30 |
| 31 | | | | | | | | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.22 | 1.06 | 0.45 | 0.36 | 0.58 | 0.27 | 0.00 | 0.00 | |

--LEGEND--

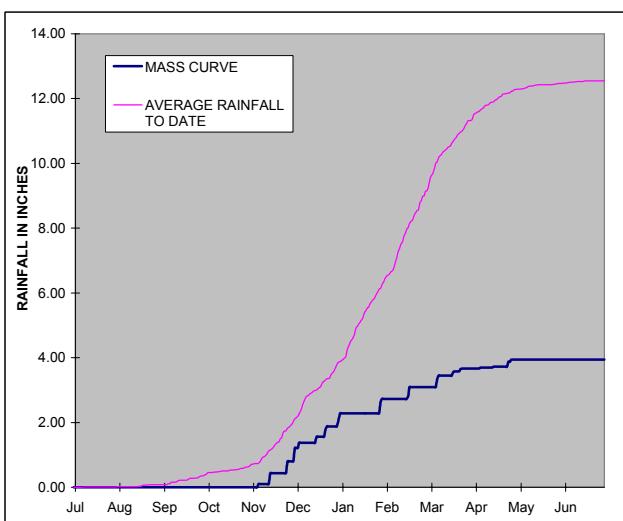
A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE

P - INCLUDED IN FOLLOWING TOTAL

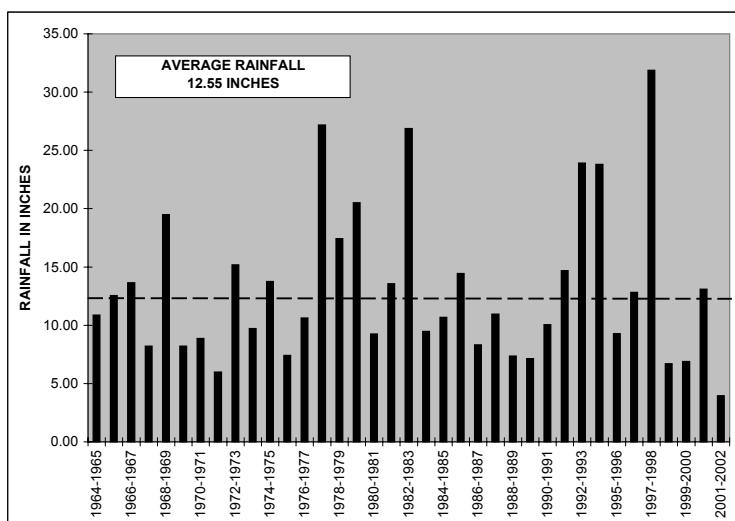
REMARKS _____

SEASON TOTAL 3.94 "

MASS CURVE VS. AVERAGE RAINFALL TO DATE



SEASON TOTALS vs. AVERAGE RAINFALL



* 1993-1994 not included

Table 14

ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT

Precipitation Summary 2001-2002

Los Alamitos - Sta. 170

GAGE ELEVATION: 7' LATITUDE 33-45-24
 SEASON TOTAL: 2.87 LONGITUDE 118-05-43
 RECORDS: 1959 to Present 40 YEAR BASE PERIOD: * 1962-2002
 MEAN: * 10.15 MEAN: 10.46
 SEASON AS %: 28.3 SEASON AS %: 27.4

| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | 2 |
| 3 | | | | | | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | | | 7 |
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| 12 | | | | | | | | | | | | | 12 |
| 13 | | | | | | | | | | | | | 13 |
| 14 | | | | | | | | | | | | | 14 |
| 15 | | | | | | | | | | | | | 15 |
| 16 | | | | | | | | | | | | | 16 |
| 17 | | | | | | | | | | | | | 17 |
| 18 | | | | | | | | | | | | | 18 |
| 19 | | | | | | | | | | | | | 19 |
| 20 | | | | | | | | | | | | | 20 |
| 21 | | | | | | | | | | | | | 21 |
| 22 | | | | | | | | | | | | | 22 |
| 23 | | | | | | | | | | | | | 23 |
| 24 | | | | | | | | | | | | | 24 |
| 25 | | | | | | | | | | | | | 25 |
| 26 | | | | | | | | | | | | | 26 |
| 27 | | | | | | | | | | | | | 27 |
| 28 | | | | | | | | | | | | | 28 |
| 29 | | | | | | | | | | | | | 29 |
| 30 | | | | | | | | | | | | | 30 |
| 31 | | | | | | | | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.89 | 0.94 | 0.29 | 0.28 | 0.22 | 0.20 | 0.05 | 0.00 | |

--LEGEND--

A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE

P - INCLUDED IN FOLLOWING TOTAL

REMARKS _____

SEASON TOTAL 2.87 "

| SEASON | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | TOTAL |
|-----------|------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|--------|
| 1961-1962 | 0.00 | 0.00 | 0.06 | 0.00 | 1.00 | 1.18 | 1.84 | 6.92 | 1.01 | 0.00 | 0.34 | 0.01 | 12.36 |
| 1962-1963 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 4.15 | 2.28 | 0.95 | 0.04 | 0.80 | 8.23 |
| 1963-1964 | 0.00 | 0.00 | 1.77 | 0.29 | 2.27 | 0.01 | 0.68 | 0.00 | 0.92 | 0.57 | 0.05 | 0.13 | 6.69 |
| 1964-1965 | 0.00 | 0.00 | 0.01 | 0.10 | 1.21 | 1.41 | 0.44 | 0.22 | 1.28 | 4.76 | 0.00 | 0.03 | 9.46 |
| 1965-1966 | 0.04 | 0.27 | 0.65 | 0.00 | 5.05 | 2.93 | 0.94 | 1.16 | 0.31 | 0.00 | 0.07 | 0.00 | 11.42 |
| 1966-1967 | 0.00 | 0.00 | 0.00 | 0.02 | 1.08 | 3.83 | 2.97 | 0.00 | 1.03 | 2.79 | 0.00 | 0.00 | 11.72 |
| 1967-1968 | 0.00 | 0.00 | 0.48 | 0.00 | 2.08 | 1.14 | 0.46 | 0.28 | 2.10 | 0.59 | 0.02 | 0.00 | 7.15 |
| 1968-1969 | NR | 0.00 | 0.00 | 0.21 | 0.34 | 1.09 | 9.84 | 5.04 | 0.98 | 0.34 | 0.07 | 0.00 | 17.91 |
| 1969-1970 | 0.02 | 0.00 | 0.00 | 0.00 | 1.64 | 0.06 | 2.03 | 0.93 | 1.61 | 0.00 | 0.00 | 0.15 | 6.44 |
| 1970-1971 | 0.00 | 0.00 | 0.00 | 0.00 | 3.03 | 3.88 | 0.84 | 0.61 | 0.19 | 0.52 | 0.39 | 0.00 | 9.46 |
| 1971-1972 | 0.00 | 0.00 | 0.00 | 0.12 | 0.14 | 3.97 | 0.00 | 0.04 | 0.01 | 0.08 | 0.01 | 0.07 | 4.44 |
| 1972-1973 | 0.00 | 0.10 | 0.20 | 0.16 | 3.42 | 1.22 | 2.66 | 3.87 | 2.04 | 0.00 | 0.00 | 0.00 | 13.67 |
| 1973-1974 | 0.00 | 0.00 | 0.00 | 0.13 | 1.77 | 0.25 | 4.44 | 0.01 | 2.65 | 0.22 | 0.00 | 0.00 | 9.47 |
| 1974-1975 | 0.00 | 0.00 | 0.00 | 0.25 | 0.01 | 4.08 | 0.14 | 1.62 | 2.09 | 1.09 | 0.00 | 0.00 | 9.28 |
| 1975-1976 | 0.00 | 0.00 | 0.00 | 0.30 | 0.27 | 0.09 | 0.00 | 1.91 | 0.58 | 1.06 | 0.00 | 0.15 | 4.36 |
| 1976-1977 | 0.00 | 0.00 | 1.74 | 0.03 | 1.22 | 0.27 | 2.44 | 0.37 | 1.06 | 0.00 | 2.11 | 0.00 | 9.24 |
| 1977-1978 | 0.00 | 1.61 | 0.00 | 0.00 | 0.00 | 2.39 | 6.29 | 5.91 | 4.89 | 1.00 | 0.00 | 0.00 | 22.09 |
| 1978-1979 | 0.00 | 0.00 | 0.90 | 0.06 | 1.12 | 0.99 | 5.05 | 2.24 | 2.71 | 0.00 | 0.00 | 0.00 | 13.07 |
| 1979-1980 | 0.00 | 0.00 | 0.00 | 0.20 | 0.46 | 0.27 | 6.41 | 6.74 | 1.87 | 0.42 | 0.00 | 0.00 | 16.37 |
| 1980-1981 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.86 | 1.72 | 1.00 | 3.16 | 0.22 | 0.01 | 0.00 | 7.97 |
| 1981-1982 | 0.00 | 0.00 | 0.00 | 0.64 | 2.62 | 0.69 | 1.52 | 0.38 | 3.10 | 0.85 | 0.07 | 0.00 | 9.87 |
| 1982-1983 | 0.00 | 0.02 | 0.34 | 0.21 | 2.28 | 0.83 | 2.04 | 2.68 | 7.33 | 1.82 | 0.32 | 0.00 | 17.87 |
| 1983-1984 | 0.00 | 0.24 | 1.02 | 1.64 | 2.42 | 1.49 | 0.24 | 0.00 | 0.06 | 0.82 | 0.00 | 0.00 | 7.93 |
| 1984-1985 | 0.00 | 0.05 | 0.04 | 0.34 | 0.88 | 4.92 | 1.24 | 1.29 | 0.42 | 0.00 | 0.00 | 0.00 | 9.18 |
| 1985-1986 | 0.00 | 0.00 | 0.15 | 0.03 | 3.09 | 0.34 | 1.13 | 4.02 | 2.64 | 0.23 | 0.00 | 0.00 | 11.63 |
| 1986-1987 | 0.12 | 0.00 | 0.87 | 0.10 | 0.64 | 0.45 | 1.60 | 0.78 | 0.49 | 0.16 | 0.00 | 0.00 | 5.21 |
| 1987-1988 | 0.03 | 0.00 | 0.00 | 0.50 | 1.29 | 1.17 | 1.54 | 0.68 | 0.27 | 1.62 | 0.00 | 0.00 | 7.10 |
| 1988-1989 | 0.00 | 0.00 | 0.38 | 0.51 | 0.11 | 0.00 | 1.51 | 1.72 | 0.12 | 0.35 | 0.73 | 0.02 | 5.45 |
| 1989-1990 | 0.00 | 0.04 | 0.00 | 0.00 | 0.32 | 0.08 | 1.39 | 1.38 | 5.04 | 0.04 | 0.00 | 0.00 | 8.29 |
| 1990-1991 | 0.08 | 0.00 | 0.08 | 0.00 | 0.06 | 1.59 | 1.52 | 4.46 | 3.35 | 0.25 | 0.00 | 0.00 | 11.39 |
| 1991-1992 | 0.04 | 0.00 | 0.00 | 0.55 | 0.00 | 5.48 | 8.09 | 3.14 | 1.61 | 0.00 | 0.00 | 0.80 | 19.71 |
| 1992-1993 | 0.04 | 0.00 | 0.00 | 0.04 | 0.51 | 0.67 | 0.28 | 4.53 | 1.67 | 0.44 | 0.24 | 0.00 | 8.38 |
| 1993-1994 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.51 | 0.67 | 0.28 | 4.53 | 1.67 | 0.44 | 0.24 | 0.00 |
| 1994-1995 | 0.00 | 0.00 | 0.00 | 0.11 | 0.47 | 0.85 | 11.73 | 0.45 | 3.90 | 0.66 | 0.10 | 0.15 | 18.42 |
| 1995-1996 | 0.03 | 0.00 | 0.00 | 0.00 | 1.32 | 1.30 | 3.24 | 0.98 | 0.46 | 0.00 | 0.00 | 0.00 | 7.33 |
| 1996-1997 | 0.00 | 0.00 | 0.00 | 0.77 | 2.00 | 2.96 | 4.75 | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 | 10.60 |
| 1997-1998 | 0.00 | 0.00 | 0.55 | 0.00 | 1.59 | 3.98 | 1.70 | 8.56 | 2.51 | 1.16 | 0.60 | 0.12 | 20.77 |
| 1998-1999 | 0.00 | 0.00 | 0.05 | 0.15 | 0.77 | 0.78 | 1.09 | 0.79 | 1.37 | 2.15 | 0.06 | 0.34 | 7.55 |
| 1999-2000 | 0.19 | 0.00 | 0.00 | 0.00 | 0.18 | 0.00 | 0.69 | 3.26 | 1.33 | 0.81 | 0.03 | 0.00 | 6.49 |
| 2000-2001 | 0.00 | 0.00 | 0.05 | 2.71 | 0.01 | 0.00 | 3.41 | 6.29 | 0.80 | 0.28 | 0.00 | 0.00 | 13.55 |
| 2001-2002 | 0.00 | 0.00 | 0.00 | 0.89 | 0.94 | 0.29 | 0.28 | 0.22 | 0.20 | 0.05 | 0.00 | 0.00 | 2.87 |
| Totals | 0.55 | 2.33 | 9.28 | 10.17 | 45.24 | 58.29 | 94.41 | 84.15 | 68.97 | 26.91 | 4.97 | 2.76 | 408.03 |
| Average | 0.01 | 0.06 | 0.24 | 0.26 | 1.16 | 1.49 | 2.42 | 2.16 | 1.77 | 0.69 | 0.13 | 0.07 | 10.46 |
| Max | 0.19 | 1.61 | 1.77 | 2.71 | 5.05 | 5.48 | 11.73 | 8.56 | 7.33 | 4.76 | 2.11 | 0.80 | 22.09 |

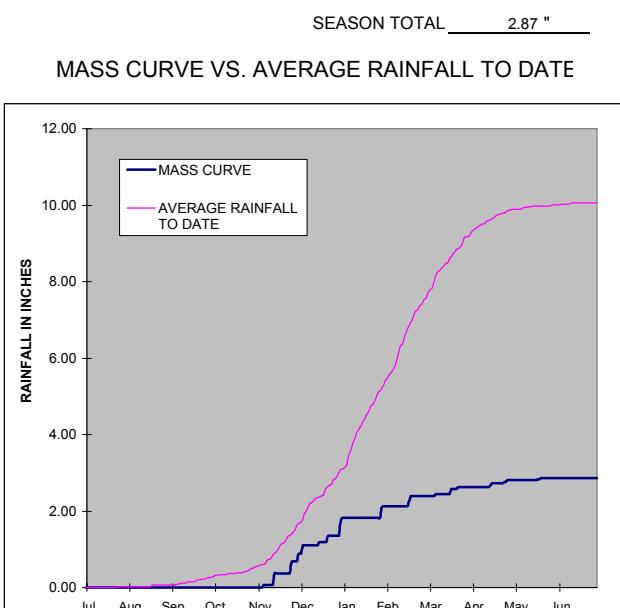
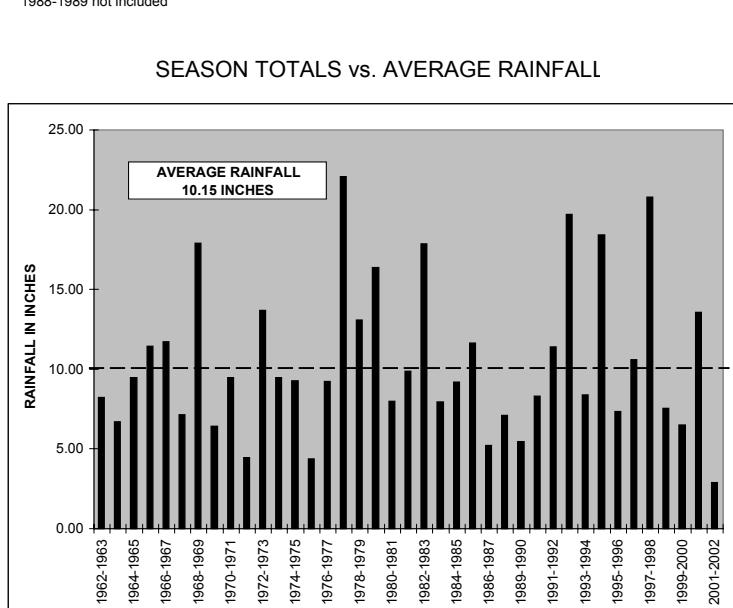


Table 15
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Villa Park Dam - Sta. 173

GAGE ELEVATION: 566' LATITUDE 33-49-02
 SEASON TOTAL: 5.24 LONGITUDE 117-46-07
 RECORDS: 1962 to Present 40 YEAR BASE PERIOD: 1962-2001
 MEAN: 15.09 MEAN: 15.11
 SEASON AS %: 34.7 SEASON AS %: 34.7

| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | 2 |
| 3 | | | | | 0.11 | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | 4 |
| 5 | | | | | 0.12 | | | | | | | | 5 |
| 6 | | | | | | | 0.05 | | | | | | 6 |
| 7 | | | | | | | 0.12 | | | | | | 7 |
| 8 | | | | | | | 0.31 | | 0.01 | | | | 8 |
| 9 | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | 10 |
| 11 | | | 0.02 | 0.01 | | | | | | | | | 11 |
| 12 | | 0.02 | | | | | | | | | | | 12 |
| 13 | | 0.52 | | | | | | | | | | | 13 |
| 14 | | | | | | | | | | | | | 14 |
| 15 | | 0.30 | | | 0.06 | | | | | | | | 15 |
| 16 | | | | | 0.04 | | | | | | | | 16 |
| 17 | | | 0.15 | | | | | | | | | | 17 |
| 18 | | | 0.10 | 0.19 | | 0.09 | | | | | | | 18 |
| 19 | | | | | | | | | | | | | 19 |
| 20 | | | | | | 0.13 | | | | | | | 20 |
| 21 | | 0.30 | | | | | | | | | | | 21 |
| 22 | | 0.01 | | | | | | | | | | | 22 |
| 23 | | | 0.07 | | | | | | | | | | 23 |
| 24 | | | 0.03 | | | | | | | | | | 24 |
| 25 | | 0.62 | | | 0.11 | | | | | | | | 25 |
| 26 | | | | | | | | | | | | | 26 |
| 27 | | | | | 0.12 | | | | | | | | 27 |
| 28 | | | 0.93 | | | | | | | | | | 28 |
| 29 | | | 0.01 | 0.05 | | | | | | | | | 29 |
| 30 | | | 0.22 | 0.30 | | | | | | | | | 30 |
| 31 | | 0.01 | 0.11 | | | | | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.01 | 1.52 | 1.15 | 0.98 | 0.25 | 0.72 | 0.38 | 0.22 | 0.01 | |

--LEGEND--

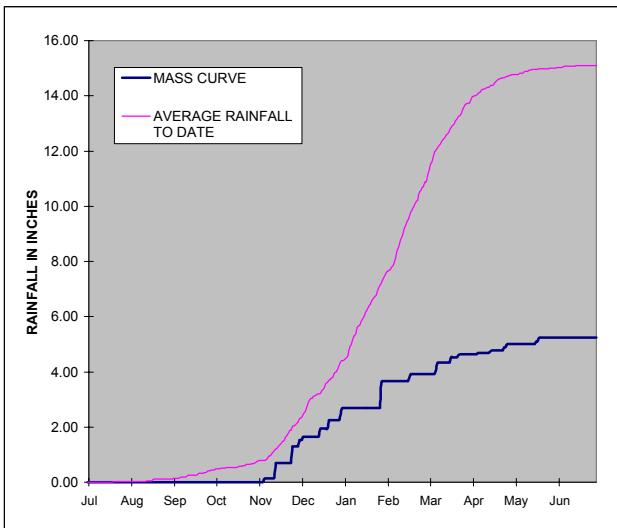
A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE

P - INCLUDED IN FOLLOWING TOTAL

REMARKS _____

SEASON TOTAL 5.24 "

MASS CURVE VS. AVERAGE RAINFALL TO DATE



SEASON TOTALS vs. AVERAGE RAINFALL

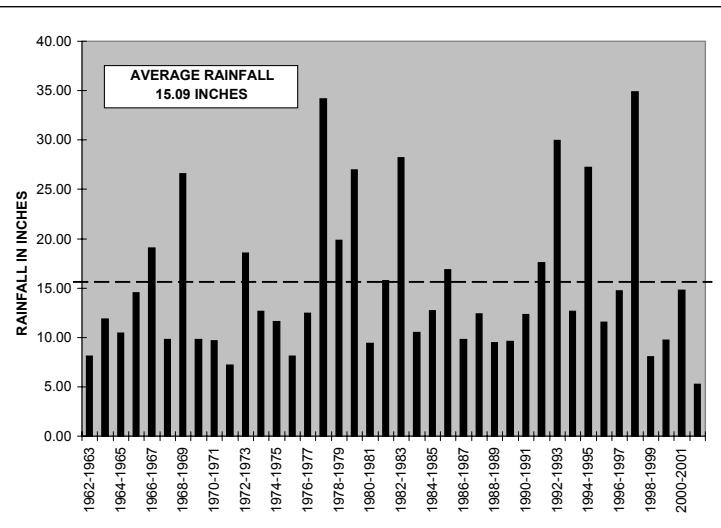


Table 16
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 El Toro - Sta. 176

GAGE ELEVATION: 445' LATITUDE 33-37-39
 SEASON TOTAL: 4.45 LONGITUDE 117-41-26
 RECORDS: 1965 to Present 35 YEAR BASE PERIOD: 1968-2002
 MEAN: 14.93 MEAN: 14.98
 SEASON AS %: 29.8 SEASON AS %: 29.7

| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
|-----|------|------|------|------|------|------|-------|------|------|------|------|------|-----|
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | 2 |
| 3 | | | | | 0.13 | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | 4 |
| 5 | | | | | 0.07 | | | | | | | | 5 |
| 6 | | | | | | | 0.13 | | | | | | 6 |
| 7 | | | | | | | 0.16 | | | | | | 7 |
| 8 | | | | | | | 0.12 | | | | | | 8 |
| 9 | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | 10 |
| 11 | | | | | 0.02 | | | | | | | | 11 |
| 12 | | | | | 0.01 | | | | | | | | 12 |
| 13 | | | | | 0.27 | | | | | | | | 13 |
| 14 | | | | | | | | | | | | | 14 |
| 15 | | | | | 0.20 | | *0.08 | | | | | | 15 |
| 16 | | | | | | | *0.04 | | | | | | 16 |
| 17 | | | | | | | 0.04 | | | | | | 17 |
| 18 | | | | | | | 0.12 | 0.19 | | | | | 18 |
| 19 | | | | | | | | 0.04 | | | | | 19 |
| 20 | | | | | | | | | | | | | 20 |
| 21 | | | | | 0.37 | | | | | | | | 21 |
| 22 | | | | | 0.05 | | | | | | | | 22 |
| 23 | | | | | | 0.06 | | | | | | | 23 |
| 24 | | | | | | 0.05 | | | | | | | 24 |
| 25 | | | | | 1.10 | | *0.16 | | | | | | 25 |
| 26 | | | | | | | | | | | | | 26 |
| 27 | | | | | | | | | | | | | 27 |
| 28 | | | | | | | 0.46 | | | | | | 28 |
| 29 | | | | | | | 0.09 | | | | | | 29 |
| 30 | | | | | 0.17 | 0.21 | | | | | | | 30 |
| 31 | | | | | | 0.11 | | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.64 | 1.07 | 0.55 | 0.16 | 0.58 | 0.41 | 0.04 | 0.00 | |

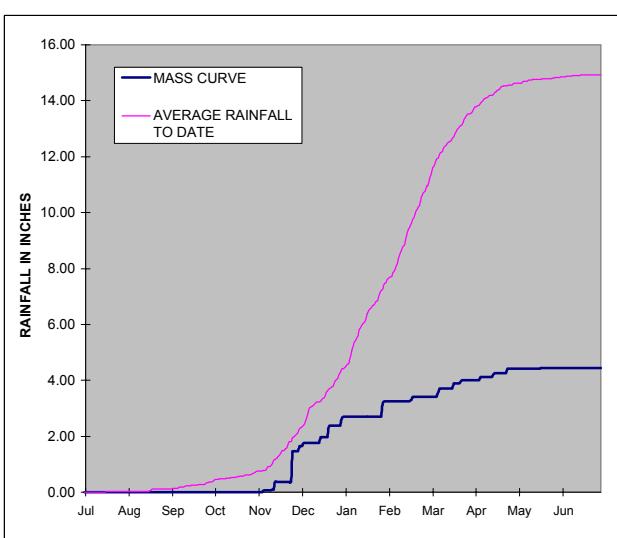
--LEGEND--

A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE
 P - INCLUDED IN FOLLOWING TOTAL

REMARKS * Totals From ALERT 207

SEASON TOTAL 4.45 "

MASS CURVE VS. AVERAGE RAINFALL TO DATE



SEASON TOTALS vs. AVERAGE RAINFALL

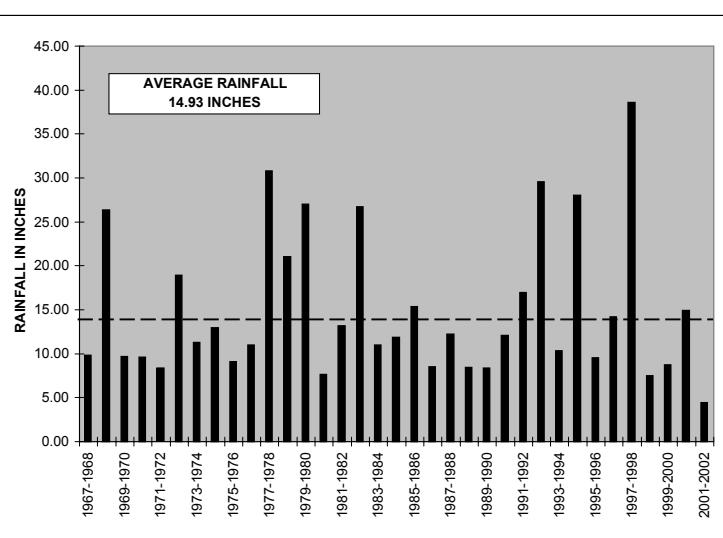


Table 17
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Palisades Reservoir - Sta. 186

GAGE ELEVATION: 360 LATITUDE 33-27-46
 SEASON TOTAL: 4.21 LONGITUDE 117-39-02
 RECORDS: 1966 to Present 30 YEAR BASE PERIOD: * 1971-2002
 MEAN: * 13.27 MEAN: 13.46
 SEASON AS %: 31.7 SEASON AS %: 31.3

| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| 1 | | | | | | | | | | | | | 1 |
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| 30 | | | | | | | | | | | | | 30 |
| 31 | | | | | | | | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.15 | 1.48 | 0.27 | 0.36 | 0.62 | 0.33 | 0.00 | 0.00 | |

| SEASON | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | TOTAL |
|-----------|------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|--------|
| 1970-1971 | 0.01 | 0.00 | 0.00 | 0.08 | 2.46 | 2.88 | 0.60 | 0.63 | 0.12 | 0.82 | 1.06 | 0.00 | 8.66 |
| 1971-1972 | 0.00 | 0.00 | 0.00 | 0.37 | 0.26 | 4.56 | 0.00 | 0.24 | 0.02 | 0.29 | 0.33 | 0.29 | 6.36 |
| 1972-1973 | 0.00 | 0.15 | 0.29 | 1.36 | 2.41 | 1.24 | 2.45 | 3.21 | 2.29 | 0.00 | 0.15 | 0.00 | 13.55 |
| 1973-1974 | 0.00 | 0.12 | 0.00 | 0.01 | 1.72 | 0.43 | 3.27 | 0.15 | 3.49 | 0.41 | 0.00 | 0.00 | 9.60 |
| 1974-1975 | 0.00 | 0.00 | 0.00 | 0.64 | 0.11 | 3.60 | 0.62 | 2.15 | 4.87 | 2.77 | 0.09 | 0.00 | 14.85 |
| 1975-1976 | 0.00 | 0.00 | 0.00 | 0.09 | 0.28 | 0.44 | 0.00 | 3.25 | 1.77 | 0.93 | 0.00 | 0.17 | 6.93 |
| 1977-1978 | 0.00 | 2.35 | 0.00 | 0.00 | 0.00 | 2.76 | 8.09 | 4.32 | 6.64 | 1.83 | 0.04 | 0.00 | 26.03 |
| 1978-1979 | 0.00 | 0.00 | 2.07 | 0.00 | 1.81 | 2.01 | 4.48 | 4.88 | 3.97 | 0.00 | 0.00 | 0.00 | 19.22 |
| 1979-1980 | 0.00 | 0.06 | 0.00 | 0.38 | 1.31 | 0.39 | 8.13 | 10.60 | 2.85 | 0.75 | 0.20 | 0.00 | 24.67 |
| 1980-1981 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.03 | 1.35 | 0.94 | 2.76 | 0.25 | 0.13 | 0.00 | 6.46 |
| 1981-1982 | 0.00 | 0.00 | 0.94 | 0.00 | 1.73 | 0.97 | 3.16 | 0.86 | 4.20 | 1.11 | 0.30 | 0.00 | 13.27 |
| 1982-1983 | 0.00 | 0.00 | 0.22 | 0.06 | 2.36 | 1.80 | 2.98 | 2.55 | 6.92 | 4.17 | 0.21 | 0.00 | 21.27 |
| 1983-1984 | 0.00 | 0.48 | 1.66 | 1.26 | 3.29 | 2.90 | 0.23 | 0.00 | 0.00 | 0.45 | 0.00 | 0.00 | 10.27 |
| 1984-1985 | 0.00 | 0.00 | 0.25 | 0.04 | 1.30 | 5.81 | 0.88 | 1.53 | 0.42 | 0.00 | 0.00 | 0.00 | 10.23 |
| 1985-1986 | 0.00 | 0.00 | 0.02 | 0.32 | 3.80 | 0.28 | 0.47 | 3.52 | 3.63 | 3.60 | 0.00 | 0.00 | 15.64 |
| 1987-1988 | 0.00 | 0.25 | 0.00 | 3.69 | 0.74 | 2.18 | 1.51 | 0.98 | 0.46 | 1.48 | 0.00 | 0.00 | 11.29 |
| 1988-1989 | 0.00 | 0.00 | 0.12 | 0.00 | 0.00 | 3.60 | 0.23 | 0.91 | 1.52 | 0.00 | 0.00 | 0.00 | 6.38 |
| 1989-1990 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.00 | 2.27 | 2.89 | 0.22 | 0.50 | 1.67 | 0.15 | 7.95 |
| 1990-1991 | 0.08 | 0.00 | 0.00 | 0.00 | 0.53 | 0.25 | 1.33 | 2.48 | 6.01 | 0.13 | 0.00 | 0.00 | 10.81 |
| 1991-1992 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.14 | 1.72 | 5.54 | 4.66 | 0.20 | 0.00 | 0.00 | 14.26 |
| 1992-1993 | 0.13 | 0.00 | 0.00 | 0.50 | 0.00 | 4.55 | 11.44 | 4.98 | 1.21 | 0.00 | 0.00 | 0.00 | 23.88 |
| 1993-1994 | 0.00 | 0.00 | 0.00 | 0.26 | 0.56 | 0.92 | 0.62 | 4.28 | 3.05 | 0.61 | 0.11 | 0.00 | 10.41 |
| 1994-1995 | 0.00 | 0.00 | 0.00 | 0.00 | 0.71 | 0.34 | 11.46 | 1.17 | 6.86 | 1.86 | 0.31 | 0.29 | 23.00 |
| 1995-1996 | 0.08 | 0.00 | 0.00 | 0.00 | 0.08 | 0.91 | 1.46 | 5.69 | 0.94 | 0.45 | 0.41 | 0.00 | 10.02 |
| 1996-1997 | 0.00 | 0.00 | 0.00 | 1.33 | 2.90 | 3.38 | 4.54 | 0.34 | 0.00 | 0.00 | 0.00 | 0.00 | 12.49 |
| 1997-1998 | 0.00 | 0.00 | 0.55 | 0.00 | 1.54 | 2.88 | 2.57 | 13.49 | 4.50 | 1.73 | 1.32 | 0.12 | 28.70 |
| 1998-1999 | 0.00 | 0.00 | 0.60 | 0.00 | 1.61 | 1.17 | 1.25 | 0.85 | 1.01 | 1.26 | 0.02 | 0.22 | 7.99 |
| 1999-2000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.24 | 0.48 | 4.84 | 2.38 | 0.73 | 0.13 | 0.00 | 8.80 |
| 2000-2001 | 0.00 | 0.00 | 0.00 | 1.95 | 0.00 | 0.00 | 3.66 | 9.16 | 0.73 | 1.00 | 0.00 | 0.00 | 16.50 |
| 2001-2002 | 0.00 | 0.00 | 0.00 | 0.00 | 1.15 | 1.48 | 0.27 | 0.36 | 0.62 | 0.33 | 0.00 | 0.00 | 4.21 |
| Totals | 0.30 | 3.41 | 6.72 | 12.34 | 32.91 | 55.14 | 81.52 | 96.79 | 78.12 | 27.66 | 6.48 | 2.31 | 403.70 |
| Average | 0.01 | 0.11 | 0.22 | 0.41 | 1.10 | 1.84 | 2.72 | 3.23 | 2.60 | 0.92 | 0.22 | 0.08 | 13.46 |
| Max | 0.13 | 2.35 | 2.07 | 3.69 | 3.80 | 5.81 | 11.46 | 13.49 | 6.92 | 4.17 | 1.67 | 1.07 | 28.70 |

* 1976-1977 and 1986-1987 not included

--LEGEND--

A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE

P - INCLUDED IN FOLLOWING TOTAL

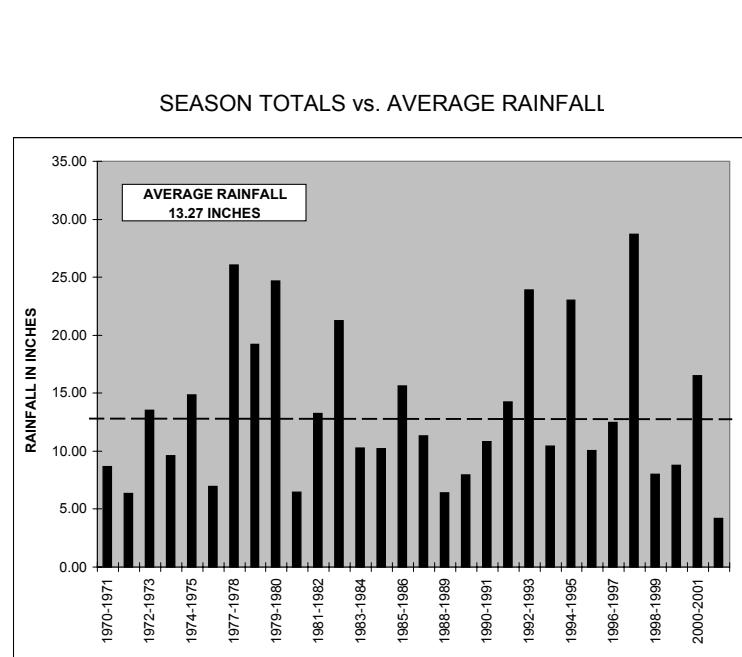
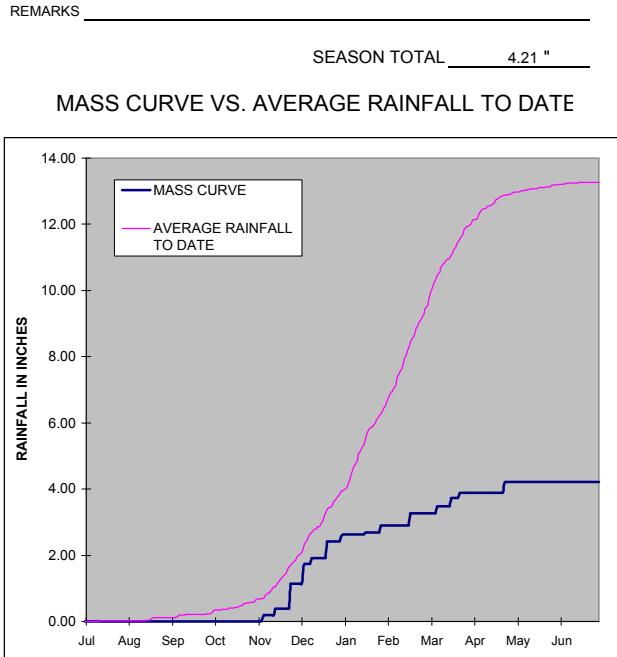


Table 18
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Trabuco Forestry - Sta. 206

| GAGE ELEVATION: | 970' | LATITUDE | 33-39-15 | | | | | | | | | | |
|-----------------|------------------|----------------------|-----------|------|------|------|------|------|------|------|------|------|-----|
| SEASON TOTAL: | 6.22 | LONGITUDE | 117-35-34 | | | | | | | | | | |
| RECORDS: | 1970 to Present* | 30 YEAR BASE PERIOD: | 1973-2002 | | | | | | | | | | |
| MEAN: * | 19.94 | MEAN: | 20.48 | | | | | | | | | | |
| SEASON AS %: | 31.2 | SEASON AS %: | 30.4 | | | | | | | | | | |
| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | 2 |
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| 16 | | | | | | | | | | | | | 16 |
| 17 | | | | | | | | | | | | | 17 |
| 18 | | | | | | | 0.51 | 0.78 | | | | | 18 |
| 19 | | | | | | | | | | | | | 19 |
| 20 | | | | | | | | | | | | | 20 |
| 21 | | | | | | | | | | | | | 21 |
| 22 | | | | | | | | | | | | | 22 |
| 23 | | | | | | | | | | | | | 23 |
| 24 | | | | | | | | | | | | | 24 |
| 25 | | | | | | | | | | | | | 25 |
| 26 | | | | | | | | 0.50 | | | | | 26 |
| 27 | | | | | | | | | | | | | 27 |
| 28 | | | | | | | | | 0.51 | | | | 28 |
| 29 | | | | | | | | | | 0.05 | | | 29 |
| 30 | | | | | | | | | | | | | 30 |
| 31 | | | | | | | | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.39 | 1.81 | 0.90 | 0.51 | 1.02 | 0.59 | 0.00 | 0.00 | |

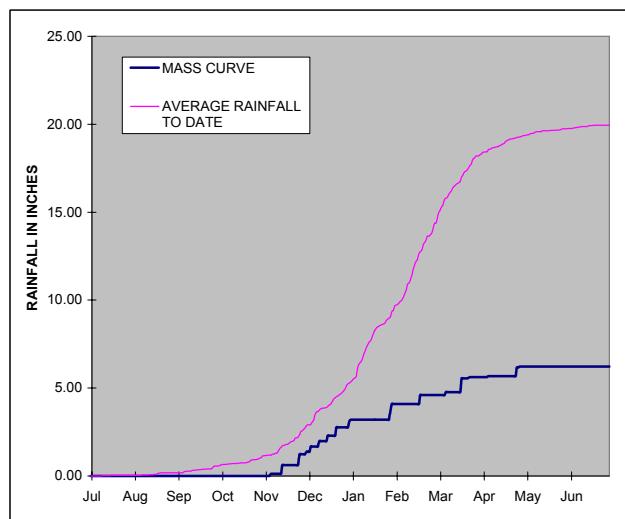
--LEGEND--

A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE
 P - INCLUDED IN FOLLOWING TOTAL

REMARKS * Totals from ALERT 233

SEASON TOTAL 6.22 "

MASS CURVE VS. AVERAGE RAINFALL TO DATE



SEASON TOTALS vs. AVERAGE RAINFALL

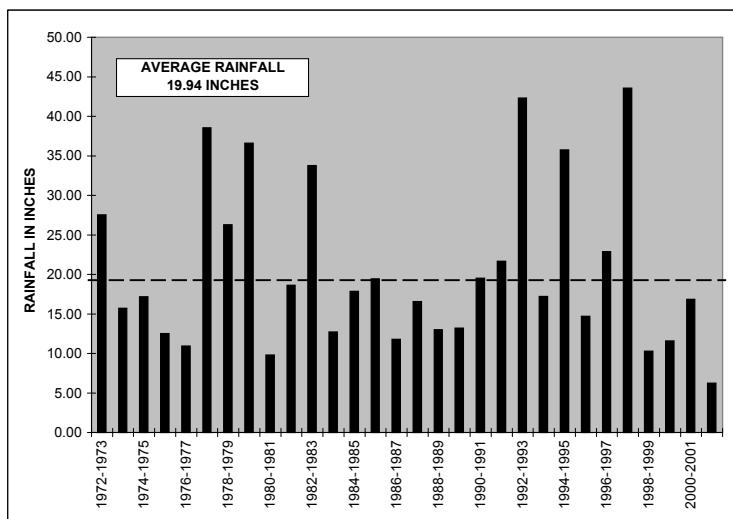


Table 19
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Santiago Peak - Sta. 208

GAGE ELEVATION: 5638' LATITUDE 33-42-06
 SEASON TOTAL: 11.24 LONGITUDE 117-32-01
 RECORDS: 1950 to Present 40 YEAR BASE PERIOD: 1963-2002
 MEAN: 34.53 MEAN: 36.84
 SEASON AS %: 32.6 SEASON AS %: 30.5

| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | 2 |
| 3 | | | | | | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | 5 |
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| 26 | | | | | | | | | | | | | 26 |
| 27 | | | | | | | | | | | | | 27 |
| 28 | | | | | | | | | | | | | 28 |
| 29 | | | | | | | | | | | | | 29 |
| 30 | | | | | | | | | | | | | 30 |
| 31 | | | | | | | | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.97 | 2.80 | 1.62 | 0.63 | 2.13 | 1.58 | 0.51 | 0.00 | |

--LEGEND--

A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE

P - INCLUDED IN FOLLOWING TOTAL

REMARKS

NOTE Prior to 1996 Season Totals taken from NWS Gage #156

SEASON TOTAL 11.24 "

| SEASON | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | TOTAL |
|-----------|------|------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|---------|
| 1962-1963 | 0.00 | 0.00 | 0.00 | 0.04 | 0.05 | 0.08 | 0.58 | 5.41 | 2.48 | 3.70 | 0.00 | 0.65 | 12.99 |
| 1963-1964 | 0.00 | 0.21 | 3.80 | 0.49 | 5.19 | 0.07 | 4.10 | 0.59 | 5.53 | 3.05 | 1.48 | 0.74 | 25.25 |
| 1964-1965 | 0.00 | 0.00 | 1.00 | 0.36 | 3.49 | 4.36 | 1.59 | 1.43 | 2.32 | 11.04 | 0.04 | 0.10 | 25.73 |
| 1965-1966 | 0.58 | 0.18 | 0.85 | 0.00 | 14.98 | 8.65 | 1.44 | 2.00 | 0.72 | 0.26 | 0.43 | 0.00 | 30.09 |
| 1966-1967 | 0.00 | 0.00 | 0.17 | 0.07 | 2.08 | 29.78 | 7.72 | 0.00 | 5.17 | 8.56 | 0.04 | 0.12 | 53.71 |
| 1967-1968 | 0.00 | 0.02 | 0.48 | 0.00 | 4.58 | 4.13 | 2.32 | 1.16 | 6.19 | 1.87 | 0.49 | 0.00 | 21.24 |
| 1968-1969 | 0.00 | 0.02 | 0.00 | 0.43 | 1.65 | 3.36 | 21.89 | 25.07 | 2.65 | 1.73 | 0.39 | 0.00 | 57.19 |
| 1969-1970 | 0.08 | 0.00 | 0.00 | 0.00 | 2.65 | 0.16 | 3.45 | 1.31 | 7.52 | 0.00 | 0.00 | 0.01 | 15.18 |
| 1970-1971 | 0.00 | 0.00 | 0.00 | 0.00 | 4.10 | 5.91 | 2.09 | 0.95 | 0.97 | 1.15 | 0.73 | 0.00 | 15.90 |
| 1971-1972 | 0.00 | 0.00 | 0.00 | 1.50 | 0.60 | 12.30 | 0.00 | 0.80 | 0.00 | 1.40 | 0.70 | 0.60 | 17.90 |
| 1972-1973 | 0.00 | 0.80 | 0.20 | 0.60 | 5.80 | 4.70 | 6.10 | 10.60 | 9.20 | 0.20 | 0.00 | 0.00 | 38.20 |
| 1973-1974 | 0.00 | 0.00 | 0.00 | 0.50 | 4.90 | 0.90 | 10.90 | 0.10 | 6.20 | 2.10 | 0.00 | 0.00 | 25.60 |
| 1974-1975 | 0.00 | 0.00 | 0.00 | 1.60 | 0.70 | 6.50 | 0.60 | 4.70 | 8.90 | 5.30 | 0.00 | 0.30 | 28.60 |
| 1975-1976 | 0.00 | 0.00 | 0.00 | 0.90 | 2.90 | 1.00 | 0.00 | 7.80 | 6.20 | 2.90 | 0.30 | 1.10 | 23.10 |
| 1976-1977 | 0.00 | 0.00 | 4.60 | 0.30 | 0.90 | 2.00 | 6.80 | 1.70 | 2.80 | 0.10 | 4.40 | 0.00 | 23.60 |
| 1977-1978 | 0.00 | 3.40 | 0.10 | 0.00 | 0.30 | 11.30 | 15.90 | 15.80 | 19.70 | 4.70 | 0.10 | 0.00 | 71.30 |
| 1978-1979 | 0.00 | 0.00 | 2.60 | 0.40 | 4.90 | 4.20 | 9.90 | 8.10 | 12.30 | 0.00 | 0.10 | 0.00 | 42.50 |
| 1979-1980 | 0.00 | 0.10 | 0.00 | 4.00 | 0.80 | 1.00 | 23.00 | 26.00 | 8.60 | 1.70 | 1.50 | 0.00 | 66.70 |
| 1980-1981 | 0.00 | 0.00 | 0.00 | 0.50 | 0.00 | 2.70 | 4.70 | 3.20 | 4.90 | 1.70 | 0.50 | 0.00 | 18.20 |
| 1981-1982 | 0.00 | 0.00 | 0.00 | 0.70 | 2.90 | 1.50 | 8.30 | 5.00 | 11.50 | 2.40 | 1.00 | 0.00 | 33.30 |
| 1982-1983 | 0.00 | 0.10 | 2.60 | 0.60 | 9.10 | 9.10 | 10.80 | 11.80 | 15.40 | 8.40 | 0.80 | 0.00 | 68.70 |
| 1983-1984 | 0.00 | 2.30 | 1.40 | 2.70 | 11.60 | 8.07 | 0.00 | 0.00 | 0.50 | 1.60 | 0.00 | 0.03 | 28.20 |
| 1984-1985 | 0.50 | 0.00 | 0.20 | 0.70 | 6.20 | 10.70 | 2.20 | 4.10 | 4.10 | 0.10 | 0.00 | 0.20 | 29.00 |
| 1985-1986 | 0.00 | 0.00 | 1.00 | 1.20 | 12.50 | 1.80 | 3.10 | 10.90 | 9.30 | 1.70 | 0.00 | 0.00 | 41.50 |
| 1986-1987 | 0.02 | 0.00 | 5.24 | 0.20 | 0.83 | 2.71 | 3.20 | 4.05 | 2.68 | 0.47 | 0.00 | 0.00 | 19.40 |
| 1987-1988 | 0.08 | 0.04 | 0.71 | 6.39 | 3.40 | 3.70 | 3.64 | 1.18 | 1.69 | 5.48 | 0.48 | 0.00 | 26.79 |
| 1988-1989 | 0.04 | 0.00 | 0.24 | 0.00 | 2.04 | 10.52 | 1.77 | 7.33 | 4.56 | 0.04 | 0.24 | 0.00 | 26.78 |
| 1989-1990 | 0.00 | 0.00 | 0.63 | 1.34 | 0.95 | 0.00 | 6.50 | 7.96 | 1.03 | 1.30 | 1.34 | 0.43 | 21.48 |
| 1990-1991 | 0.00 | 0.08 | 0.00 | 0.00 | 1.49 | 0.28 | 3.12 | 4.65 | 18.52 | 0.08 | 0.00 | 0.00 | 28.22 |
| 1991-1992 | 0.04 | 0.04 | 0.20 | 1.61 | 0.20 | 2.87 | 5.15 | 17.48 | 17.06 | 0.36 | 0.00 | 0.00 | 45.01 |
| 1992-1993 | 0.87 | 0.00 | 0.00 | 2.83 | 0.00 | 12.44 | 46.70 | 21.50 | 3.27 | 0.00 | 0.00 | 3.03 | 90.64 |
| 1993-1994 | 0.00 | 0.00 | 0.00 | 0.44 | 2.80 | 2.05 | 1.18 | 10.71 | 4.91 | 2.99 | 1.22 | 0.00 | 26.30 |
| 1994-1995 | 0.00 | 0.00 | 0.00 | 2.68 | 2.76 | 2.48 | 36.86 | 14.87 | 18.19 | 1.03 | 1.62 | 3.11 | 83.60 |
| 1995-1996 | 0.12 | 0.00 | 0.00 | 0.00 | 0.55 | 2.95 | 4.45 | 11.50 | 6.33 | 2.72 | 0.00 | 0.00 | 28.62 |
| 1996-1997 | 0.00 | 0.00 | 0.00 | 3.10 | 6.80 | 22.45 | 17.52 | 1.22 | 0.00 | 0.00 | 0.00 | 0.71 | 51.80 |
| 1997-1998 | 0.00 | 0.00 | 1.85 | 0.00 | 9.49 | 9.41 | 13.56 | 44.92 | 9.91 | 3.71 | 12.27 | 1.03 | 106.15 |
| 1998-1999 | 0.00 | 0.00 | 0.87 | 0.39 | 6.07 | 3.78 | 2.75 | 4.02 | 1.73 | 5.20 | 0.31 | 1.18 | 26.30 |
| 1999-2000 | 0.55 | 0.00 | 0.00 | 0.00 | 0.75 | 0.00 | 4.52 | 20.42 | 4.57 | 4.57 | 0.55 | 0.00 | 35.93 |
| 2000-2001 | 0.00 | 0.00 | 0.95 | 4.70 | 0.32 | 0.08 | 5.80 | 11.41 | 2.91 | 5.60 | 0.00 | 0.00 | 31.77 |
| 2001-2001 | 0.00 | 0.00 | 0.00 | 0.00 | 1.97 | 2.80 | 1.62 | 0.63 | 2.13 | 1.58 | 0.51 | 0.00 | 11.24 |
| Totals | 2.88 | 7.29 | 29.69 | 41.27 | 143.25 | 212.79 | 305.82 | 332.37 | 252.64 | 100.79 | 31.54 | 13.34 | 1473.71 |
| Average | 0.07 | 0.18 | 0.74 | 1.03 | 3.58 | 5.32 | 7.65 | 8.31 | 6.32 | 2.52 | 0.79 | 0.33 | 36.84 |
| Max | 0.87 | 3.40 | 5.24 | 6.39 | 14.98 | 29.78 | 46.70 | 44.92 | 19.70 | 11.04 | 12.27 | 3.11 | 106.15 |

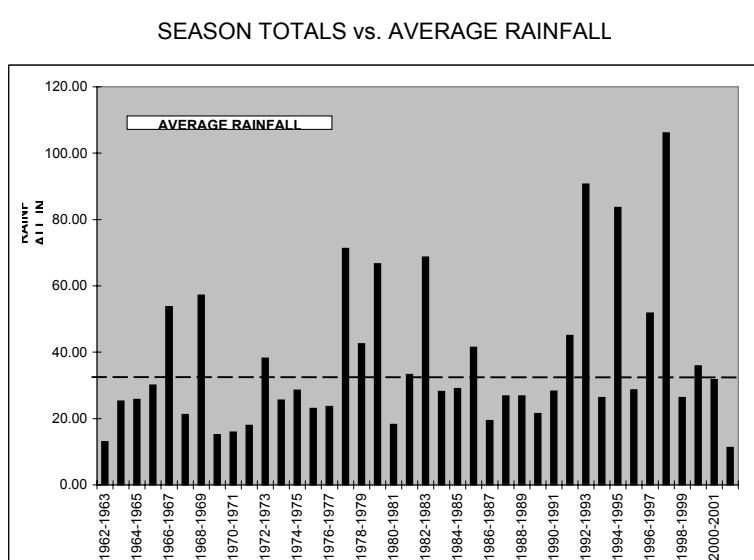
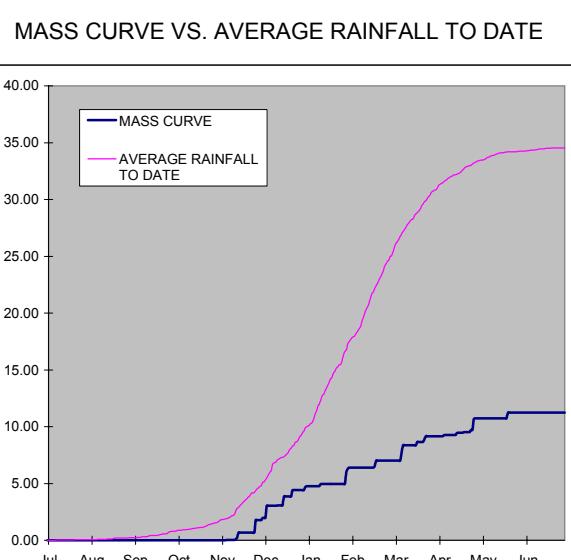


Table 20
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Sulphur Creek Dam - Sta. 216

GAGE ELEVATION: 200' LATITUDE 33-32-59
 SEASON TOTAL: 5.10 LONGITUDE 117-42-20
 RECORDS: 1975 to Present 25 YEAR BASE PERIOD: 1978-2002
 MEAN: 14.50 MEAN: 15.08
 SEASON AS %: 35.2 SEASON AS %: 33.8

| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
|-----|------|------|------|------|------|------|------|-------|------|------|------|------|-----|
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | 2 |
| 3 | | | | | | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | | | 7 |
| 8 | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | 11 |
| 12 | | | | | | | | | | | | | 12 |
| 13 | | | | | | | | | | | | | 13 |
| 14 | | | | | | | | | | | | | 14 |
| 15 | | | | | | | | | | | | | 15 |
| 16 | | | | | | | | | | | | | 16 |
| 17 | | | | | | | | | | | | | 17 |
| 18 | | | | | | | 0.30 | 0.22 | | | | | 18 |
| 19 | | | | | | | | | | | | | 19 |
| 20 | | | | | | | | | | | | | 20 |
| 21 | | | | | | | | | | | | | 21 |
| 22 | | | | | | | | | | | | | 22 |
| 23 | | | | | | | | | | | | | 23 |
| 24 | | | | | | | | | | | | | 24 |
| 25 | | | | | | | | | | | | | 25 |
| 26 | | | | | | | | | | | | | 26 |
| 27 | | | | | | | | | | | | | 27 |
| 28 | | | | | | | | | | | | | 28 |
| 29 | | | | | | | | | | | | | 29 |
| 30 | | | | | | | 0.29 | *0.12 | | | | | 30 |
| 31 | | | | | | | | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.58 | 1.45 | 0.67 | 0.30 | 0.80 | 0.30 | 0.00 | 0.00 | |

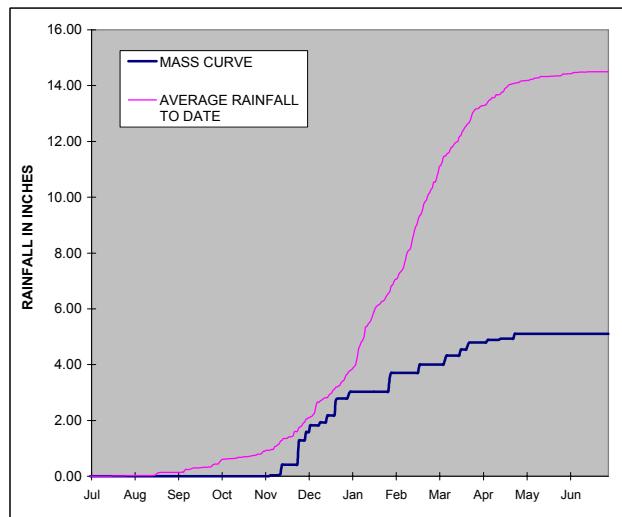
--LEGEND--

A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE
 P - INCLUDED IN FOLLOWING TOTAL

REMARKS * Total From ALERT 1152

SEASON TOTAL 5.10 "

MASS CURVE VS. AVERAGE RAINFALL TO DATE



SEASON TOTALS vs. AVERAGE RAINFALL

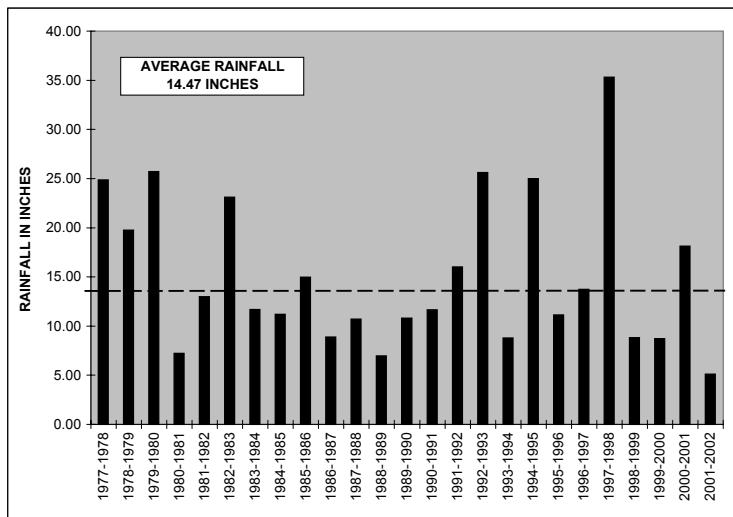


Table 21
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Orange - Hardacre - Sta. 222

GAGE ELEVATION: 298' LATITUDE 33-48-53
 SEASON TOTAL: 4.96 LONGITUDE 117-49-20
 RECORDS: 1929 to Present 40 YEAR BASE PERIOD: 1963-2002
 MEAN: 14.02 MEAN: 14.19
 SEASON AS %: 35.4 SEASON AS %: 35.0

| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | 2 |
| 3 | | | | 0.24 | 0.03 | | | | | | | | 3 |
| 4 | | | 0.03 | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | 5 |
| 6 | | | | | | | 0.04 | | | | | | 6 |
| 7 | | | | | | | 0.20 | | | | | | 7 |
| 8 | | | | | | | 0.03 | | | 0.02 | | | 8 |
| 9 | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | 10 |
| 11 | | | | 0.02 | | | | | | | | | 11 |
| 12 | | | 0.03 | | | | | | | | | | 12 |
| 13 | | | 0.46 | | | | | | | | | | 13 |
| 14 | | | | | | | | | | | | | 14 |
| 15 | | | 0.24 | | | 0.11 | | | | | | | 15 |
| 16 | | | | | | | | | | | | | 16 |
| 17 | | | | 0.18 | | | | | | | | | 17 |
| 18 | | | | 0.04 | 0.12 | | 0.06 | | | | | | 18 |
| 19 | | | | | | | | | | | | | 19 |
| 20 | | | | | | | 0.05 | | | | | | 20 |
| 21 | | | 0.44 | | | 0.19 | | | | | | | 21 |
| 22 | | | 0.03 | | | | | | | | | | 22 |
| 23 | | | | 0.12 | | | | | | | | | 23 |
| 24 | | | | 0.03 | | | | | | | | | 24 |
| 25 | | | 0.70 | | | 0.08 | | | | | | | 25 |
| 26 | | | | | | | | | | | | | 26 |
| 27 | | | | | | | | | | | | | 27 |
| 28 | | | | 0.78 | | | | | | | | | 28 |
| 29 | | | | 0.04 | 0.02 | | | | | | | | 29 |
| 30 | | | 0.21 | 0.29 | | | | | | | | | 30 |
| 31 | | 0.13 | | | | | | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.45 | 1.37 | 0.85 | 0.22 | 0.52 | 0.23 | 0.30 | 0.02 | |

--LEGEND--

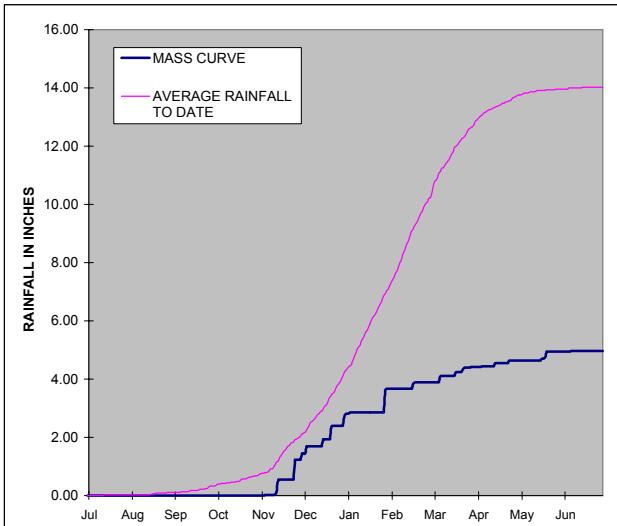
A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE

P - INCLUDED IN FOLLOWING TOTAL

REMARKS _____

SEASON TOTAL 4.96 "

MASS CURVE VS. AVERAGE RAINFALL TO DATE



SEASON TOTALS vs. AVERAGE RAINFALL

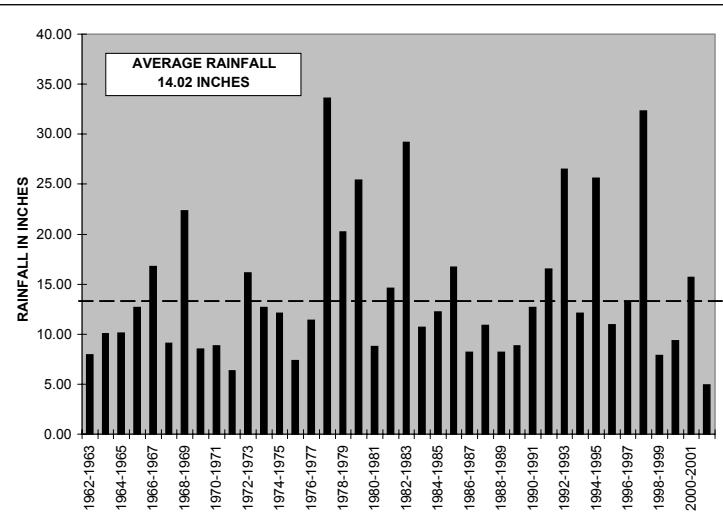


Table 22
ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT
 Precipitation Summary 2001-2002
 Garden Grove Fire - Sta. 229

| GAGE ELEVATION: | 80' | LATITUDE | 33-47-26 | | | | | | | | | | |
|-----------------|-----------------|----------------------|-----------|------|------|------|------|------|------|------|------|------|-----|
| SEASON TOTAL: | 3.40 | LONGITUDE | 117-58-03 | | | | | | | | | | |
| RECORDS: | 1986 to Present | 15 YEAR BASE PERIOD: | 1988-2002 | | | | | | | | | | |
| MEAN: | 12.26 | MEAN: | 12.78 | | | | | | | | | | |
| SEASON AS %: | 27.7 | SEASON AS %: | 26.6 | | | | | | | | | | |
| DAY | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | DAY |
| 1 | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | 2 |
| 3 | | | | | | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | | | 7 |
| 8 | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | 11 |
| 12 | | | | | | | | | | | | | 12 |
| 13 | | | | | | | | | | | | | 13 |
| 14 | | | | | | | | | | | | | 14 |
| 15 | | | | | | | | | | | | | 15 |
| 16 | | | | | | | | | | | | | 16 |
| 17 | | | | | | | | | | | | | 17 |
| 18 | | | | | | | | | | | | | 18 |
| 19 | | | | | | | | | | | | | 19 |
| 20 | | | | | | | | | | | | | 20 |
| 21 | | | | | | | | | | | | | 21 |
| 22 | | | | | | | | | | | | | 22 |
| 23 | | | | | | | | | | | | | 23 |
| 24 | | | | | | | | | | | | | 24 |
| 25 | | | | | | | | | | | | | 25 |
| 26 | | | | | | | | | | | | | 26 |
| 27 | | | | | | | | | | | | | 27 |
| 28 | | | | | | | | | | | | | 28 |
| 29 | | | | | | | | | | | | | 29 |
| 30 | | | | | | | | | | | | | 30 |
| 31 | | | | | | | | | | | | | 31 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 1.22 | 1.11 | 0.33 | 0.33 | 0.25 | 0.16 | 0.00 | 0.00 | |

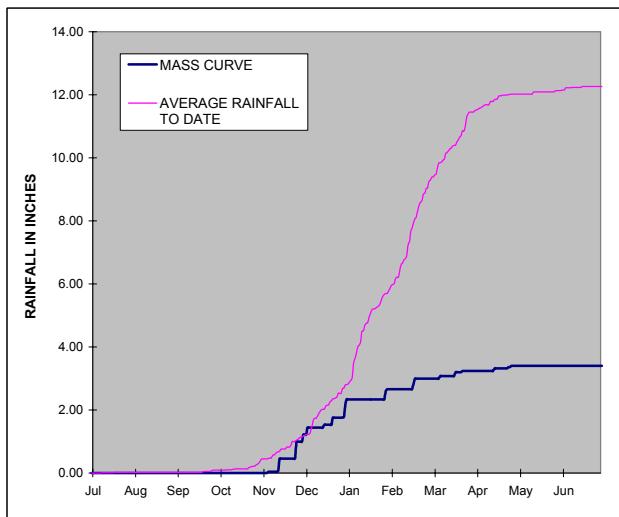
--LEGEND--

A - ESTIMATED C - INCOMPLETE NR - NO RECORD
 B - PARTIALLY ESTIMATED D - DATE UNCERTAIN T - TRACE
 P - INCLUDED IN FOLLOWING TOTAL

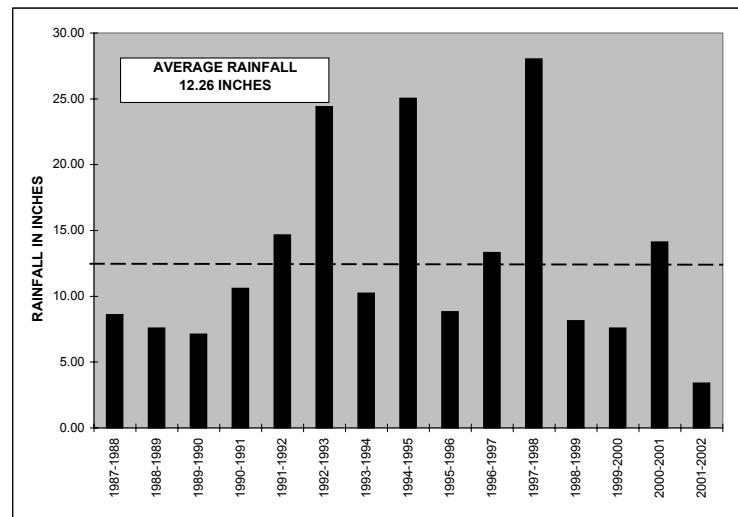
REMARKS _____

SEASON TOTAL 3.40 "

MASS CURVE VS. AVERAGE RAINFALL TO DATE



SEASON TOTALS vs. AVERAGE RAINFALL



AVERAGE RAINFALL
12.26 INCHES

Table 23

Public Facilities and Resources Department
**SHORT - DURATION INTENSITY DATA
FOR SELECTED RAINFALL STATIONS**

2001-2002
(MAXIMUM PRECIPITATION IN INCHES)

| STATION NO. NAME | | DURATION | | | | | | | | |
|---------------------|-----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | 10 MINS | 15 MINS | 30 MINS | 1 HR | 2 HR | 3 HR | 6 HRS | 12 HR | 24 HR |
| 203 | Portola Park | 0.12 Jan-30 | 0.16 Jan-30 | 0.16 Jan-30 | 0.20 Jan-30 | 0.27 Nov-12 | 0.31 Nov-12 | 0.32 Nov-24 | 0.44 Nov-24 | 0.44 Nov-24 |
| 207 | El Toro | 0.32 Nov-24 | 0.40 Nov-24 | 0.44 Nov-24 | 0.52 Nov-24 | 0.59 Nov-24 | 1.07 Nov-24 | 1.07 Nov-24 | 1.07 Nov-24 | 1.07 Nov-24 |
| 215 | San Juan Capistrano | 0.43 Nov-24 | 0.59 Nov-24 | 0.87 Nov-24 | 1.02 Nov-24 | 1.06 Nov-24 | 1.45 Nov-24 | 1.45 Nov-24 | 1.45 Nov-24 | 1.45 Nov-24 |
| 217 | Lambert Reservoir | 0.19 Dec-21 | 0.20 Nov-24 | 0.24 Nov-24 | 0.32 Nov-24 | 0.36 Nov-24 | 0.48 Nov-24 | 0.48 Nov-24 | 0.48 Nov-24 | 0.48 Nov-24 |
| 219 | Santa Ana Engineering | 0.16 Nov-24 | 0.20 Nov-24 | 0.36 Nov-24 | 0.40 Nov-24 | 0.44 Nov-24 | 0.44 Nov-24 | 0.47 Jan-27 | 0.47 Jan-27 | 0.47 Jan-27 |
| 232 | Lower Oso Creek | 0.28 Nov-24 | 0.36 Nov-24 | 0.51 Nov-24 | 0.59 Nov-24 | 0.67 Nov-24 | 0.79 Nov-24 | 0.79 Nov-24 | 0.79 Nov-24 | 0.79 Nov-24 |
| 239 | Westminster Ch. | 0.16 Nov-24 | 0.24 Nov-24 | 0.28 Nov-24 | 0.32 Nov-24 | 0.36 Nov-24 | 0.36 Nov-24 | 0.36 Nov-24 | 0.36 Nov-24 | 0.36 Nov-24 |
| 248 | Coto De Caza | 0.19 Nov-12 | 0.23 Nov-24 | 0.31 Nov-24 | 0.39 Nov-24 | 0.43 Nov-24 | 0.78 Nov-24 | 0.78 Nov-24 | 0.78 Nov-24 | 0.78 Nov-24 |
| 270 | Yorba Park | 0.27 Nov-12 | 0.36 Nov-24 | 0.59 Nov-24 | 0.87 Nov-24 | 0.91 Nov-24 | 1.03 Nov-24 | 1.03 Nov-24 | 1.03 Nov-24 | 1.03 Nov-24 |
| 288 | Oceanview | 0.16 Nov-24 | 0.24 Nov-24 | 0.32 Nov-24 | 0.36 Nov-24 | 0.36 Nov-24 | 0.36 Nov-24 | 0.36 Nov-24 | 0.44 Dec-20 | 0.44 Dec-20 |

Table 23
(CONTINUED)

Public Facilities and Resources Department

SHORT - DURATION INTENSITY DATA

FOR SELECTED RAINFALL STATIONS

2001-2002

(MAXIMUM PRECIPITATION IN INCHES)

| STATION | | DURATION | | | | | | | | |
|---------|-----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | 10 MINS | 15 MINS | 30 MINS | 1 HR | 2 HR | 3 HR | 6 HRS | 12 HR | 24 HR |
| NO. | NAME | | | | | | | | | |
| 1111 | Santa Ana Delhi | 0.20 Nov-24 | 0.24 Nov-24 | 0.28 Nov-24 | 0.39 Nov-12 | 0.43 Nov-12 | 0.44 Jan-27 | 0.48 Jan-27 | 0.48 Jan-27 | 0.48 Jan-27 |
| 1117 | Anaheim Barber City | 0.16 Nov-24 | 0.20 Nov-24 | 0.31 Nov-24 | 0.31 Nov-24 | 0.31 Nov-24 | 0.31 Nov-24 | 0.31 Nov-24 | 0.32 Dec-29 | 0.32 Dec-29 |
| 1140 | Fullerton Airport | 0.32 Nov-24 | 0.47 Nov-24 | 0.75 Nov-24 | 1.03 Nov-24 | 1.07 Nov-24 | 1.07 Nov-24 | 1.07 Nov-24 | 1.07 Nov-24 | 1.07 Nov-24 |
| 1141 | Upper Aliso Creek | 0.20 Nov-24 | 0.24 Nov-24 | 0.40 Nov-24 | 0.44 Nov-24 | 0.51 Nov-24 | 0.79 Nov-24 | 0.79 Nov-24 | 0.79 Nov-24 | 0.79 Nov-24 |
| 1145 | Pico Basin San Clemente | 0.20 Nov-24 | 0.24 Nov-24 | 0.40 Nov-24 | 0.55 Nov-24 | 0.67 Nov-24 | 1.03 Nov-24 | 1.07 Nov-24 | 1.07 Nov-24 | 1.07 Nov-24 |
| 1150 | Costa Mesa | 0.24 Nov-24 | 0.28 Nov-24 | 0.32 Nov-24 | 0.36 Nov-24 | 0.40 Nov-24 | 0.44 Nov-24 | 0.44 Nov-24 | 0.44 Nov-24 | 0.44 Nov-24 |
| 1155 | Segunda Desheca | 0.28 Nov-24 | 0.36 Nov-24 | 0.56 Nov-24 | 0.67 Nov-24 | 0.75 Nov-24 | 0.90 Nov-24 | 0.90 Nov-24 | 0.90 Nov-24 | 0.90 Nov-24 |
| 1165 | Yorba Reservoir | 0.28 Nov-24 | 0.39 Nov-24 | 0.67 Nov-24 | 0.95 Nov-24 | 1.03 Nov-24 | 1.26 Nov-24 | 1.26 Nov-24 | 1.26 Nov-24 | 1.26 Nov-24 |
| 1180 | Gilbert Basin | 0.24 Nov-12 | 0.32 Nov-24 | 0.48 Nov-24 | 0.55 Nov-24 | 0.59 Nov-24 | 0.75 Nov-24 | 0.75 Nov-24 | 0.75 Nov-24 | 0.75 Nov-24 |
| 1195 | San Diego Creek @ Culver | 0.19 Nov-12 | 0.20 Nov-24 | 0.28 Nov-24 | 0.35 Nov-12 | 0.39 Nov-12 | 0.40 Jan-27 | 0.44 Jan-27 | 0.44 Jan-27 | 0.44 Jan-27 |

Table 24

Public Facilities and Resources Department
LONG - DURATION INTENSITY DATA
FOR SELECTED RAINFALL STATIONS

2001-2002
(MAXIMUM PRECIPITATION IN INCHES)

| STATION NO. NAME | | DURATION IN DAYS | | | | | | | | | |
|---------------------|-----------------------|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | 2 | 3 | 4 | 6 | 8 | 10 | 15 | 20 | 30 | 60 |
| 203 | Portola Park | 0.44 Nov-23 | 0.44 Nov-22 | 0.56 Jan-27 | 0.59 Nov-24 | 0.59 Nov-22 | 0.79 Nov-24 | 0.79 Nov-10 | 0.94 Nov-10 | 1.18 Nov-4 | 1.53 Nov-11 |
| 207 | El Toro | 1.07 Nov-23 | 1.07 Nov-22 | 1.07 Nov-21 | 1.22 Nov-24 | 1.22 Nov-22 | 1.38 Nov-23 | 1.38 Nov-10 | 1.53 Nov-10 | 1.97 Nov-22 | 2.64 Nov-1 |
| 215 | San Jaun Capistrano | 1.45 Nov-23 | 1.45 Nov-22 | 1.45 Nov-21 | 1.77 Nov-24 | 1.77 Nov-22 | 1.81 Nov-23 | 1.81 Nov-18 | 1.96 Nov-20 | 2.56 Nov-22 | 2.95 Nov-1 |
| 217 | Lambert Reservoir | 0.52 Jan-27 | 0.52 Jan-26 | 0.52 Jan-25 | 0.60 Nov-24 | 0.63 Nov-23 | 0.71 Nov-23 | 0.83 Dec-7 | 1.03 Dec-10 | 1.54 Nov-22 | 2.24 Nov-1 |
| 219 | Santa Ana Engineering | 0.55 Jan-27 | 0.55 Jan-26 | 0.55 Jan-25 | 0.63 Nov-24 | 0.63 Nov-22 | 0.83 Nov-23 | 0.83 Nov-18 | 0.94 Nov-10 | 1.19 Nov-21 | 1.97 Nov-1 |
| 232 | Lower Oso Creek | 0.79 Nov-23 | 0.79 Nov-22 | 0.79 Nov-21 | 0.79 Nov-19 | 0.79 Nov-17 | 0.83 Nov-24 | 1.02 Nov-10 | 1.02 Nov-5 | 1.18 Nov-11 | 1.45 Jan-23 |
| 239 | Westminster Ch. | 0.47 Dec-29 | 0.47 Dec-28 | 0.47 Dec-27 | 0.55 Nov-24 | 0.55 Nov-22 | 0.71 Nov-23 | 0.83 Dec-20 | 0.91 Dec-11 | 1.15 Nov-22 | 2.01 Nov-1 |
| 248 | Coto De Caza | 0.78 Nov-23 | 0.78 Nov-22 | 0.78 Nov-21 | 0.90 Nov-24 | 0.90 Nov-22 | 0.98 Nov-23 | 1.02 Nov-10 | 1.14 Nov-10 | 1.61 Nov-22 | 2.09 Nov-2 |
| 270 | Yorba Park | 1.03 Nov-23 | 1.03 Nov-22 | 1.03 Nov-21 | 1.18 Nov-24 | 1.18 Nov-22 | 1.38 Nov-23 | 1.54 Nov-10 | 1.69 Nov-10 | 1.93 Nov-22 | 2.76 Nov-1 |
| 288 | Oceanview | 0.47 Dec-29 | 0.47 Dec-28 | 0.47 Dec-27 | 0.60 Nov-24 | 0.60 Nov-22 | 0.75 Nov-24 | 0.95 Dec-20 | 0.95 Dec-11 | 1.23 Nov-22 | 2.01 Nov-1 |

Table 24
(CONTINUED)

Public Facilities and Resources Department
LONG - DURATION INTENSITY DATA
FOR SELECTED RAINFALL STATIONS

2001-2002
(MAXIMUM PRECIPITATION IN INCHES)

| STATION NO. NAME | | DURATION IN DAYS | | | | | | | | | |
|---------------------|-----------------------------|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|
| | | 2 | 3 | 4 | 6 | 8 | 10 | 15 | 20 | 30 | 60 |
| 1111 | Santa Ana Delhi | 0.48 Jan-26 | 0.52 Jan-27 | 0.52 Jan-26 | 0.67 Nov-24 | 0.71 Nov-23 | 0.79 Nov-23 | 0.83 Nov-20 | 1.14 Nov-11 | 1.30 Nov-3 | 2.28 Nov-1 |
| 1117 | Anaheim Barber City | 0.47 Dec-29 | 0.47 Dec-28 | 0.47 Dec-27 | 0.47 Nov-24 | 0.47 Nov-22 | 0.70 Nov-23 | 0.70 Nov-18 | 0.71 Nov-10 | 0.98 Nov-3 | 1.69 Nov-1 |
| 1140 | Fullerton Airport | 1.07 Nov-23 | 1.07 Nov-22 | 1.07 Nov-21 | 1.22 Nov-24 | 1.22 Nov-22 | 1.42 Nov-23 | 1.42 Nov-10 | 1.57 Nov-10 | 1.93 Nov-22 | 2.68 Nov-4 |
| 1141 | Upper Aliso Creek | 0.79 Nov-23 | 0.79 Nov-22 | 0.79 Nov-21 | 0.91 Nov-24 | 0.95 Nov-23 | 1.10 Nov-23 | 1.18 Nov-10 | 1.34 Nov-11 | 1.77 Nov-22 | 2.56 Nov-1 |
| 1145 | Pico Basin San Clemente | 1.07 Nov-23 | 1.07 Nov-22 | 1.07 Nov-21 | 1.42 Nov-24 | 1.46 Nov-23 | 1.58 Nov-23 | 1.58 Nov-18 | 1.74 Nov-21 | 2.29 Nov-23 | 2.72 Nov-1 |
| 1150 | Costa Mesa | 0.44 Nov-23 | 0.44 Nov-22 | 0.44 Nov-21 | 0.75 Nov-24 | 0.75 Nov-22 | 0.87 Nov-24 | 0.87 Nov-19 | 1.10 Nov-10 | 1.30 Nov-22 | 2.09 Nov-1 |
| 1155 | Segunda Desheca | 0.90 Nov-23 | 0.90 Nov-22 | 0.90 Nov-21 | 1.26 Nov-24 | 1.26 Nov-22 | 1.37 Nov-23 | 1.37 Nov-18 | 1.50 Nov-10 | 1.73 Nov-22 | 2.13 Nov-1 |
| 1165 | Yorba Reservoir | 1.38 May-4 | 1.38 May-3 | 1.38 May-2 | 1.42 Nov-24 | 1.42 Nov-22 | 1.62 Nov-23 | 1.69 Nov-10 | 1.85 Nov-10 | 2.21 Nov-22 | 2.99 Nov-4 |
| 1180 | Gilbert Basin | 0.75 Nov-23 | 0.75 Nov-22 | 0.75 Nov-21 | 0.91 Nov-24 | 0.91 Nov-22 | 1.15 Nov-23 | 1.15 Nov-18 | 1.30 Nov-10 | 1.58 Nov-21 | 2.44 Nov-4 |
| 1195 | San Diego Creek @ Culver | 0.48 Jan-27 | 0.51 Jan-27 | 0.51 Jan-26 | 0.63 Nov-24 | 0.63 Nov-22 | 0.75 Nov-23 | 0.86 Nov-10 | 1.10 Nov-10 | 1.30 Nov-3 | 2.32 Nov-1 |

Figure 1
HISTORICAL PRECIPITATION STATIONS
LOCATION MAP

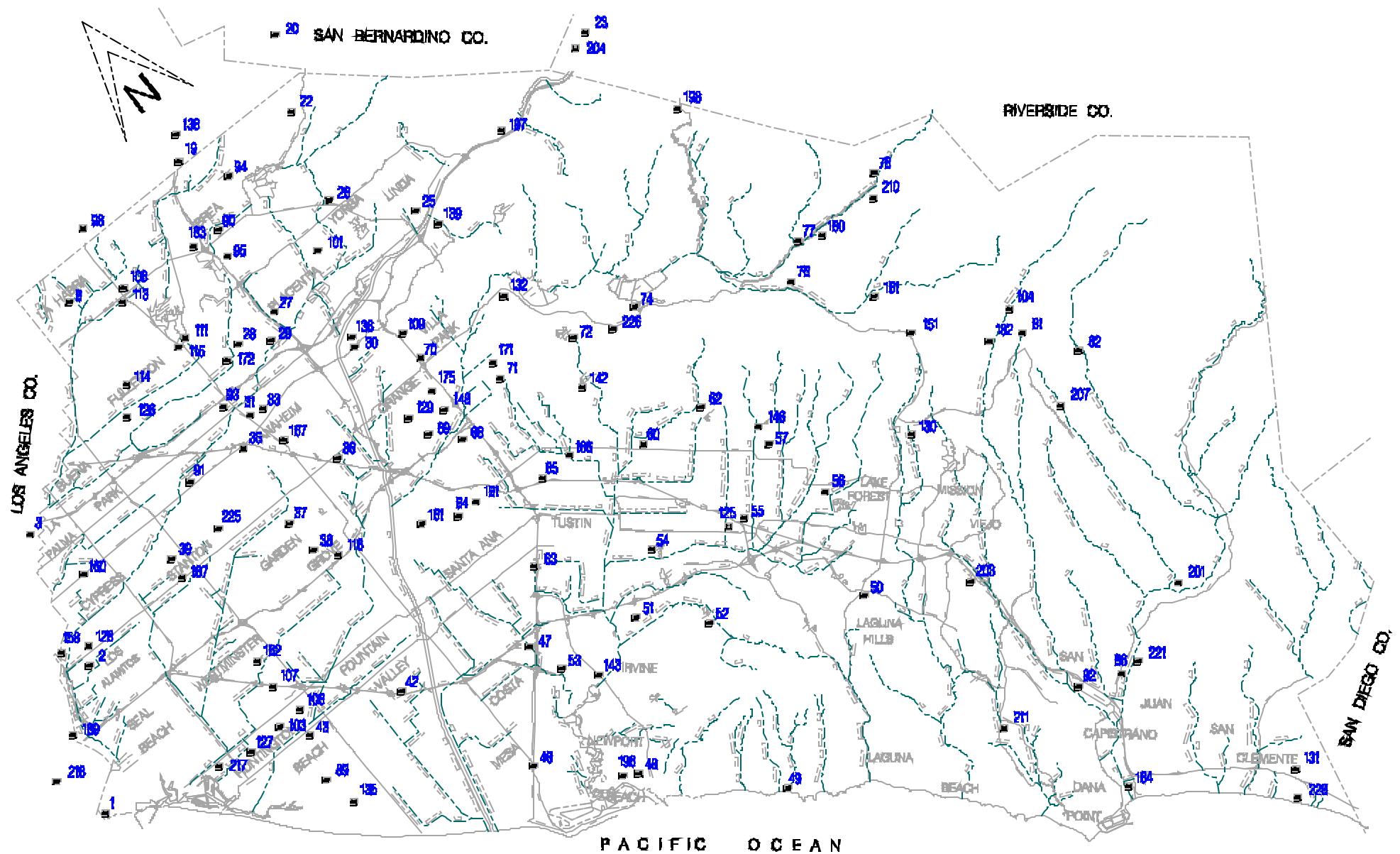


Figure 2

ACTIVE RECORDING AND NON-RECORDING PRECIPITATION SITES LOCATION MAP

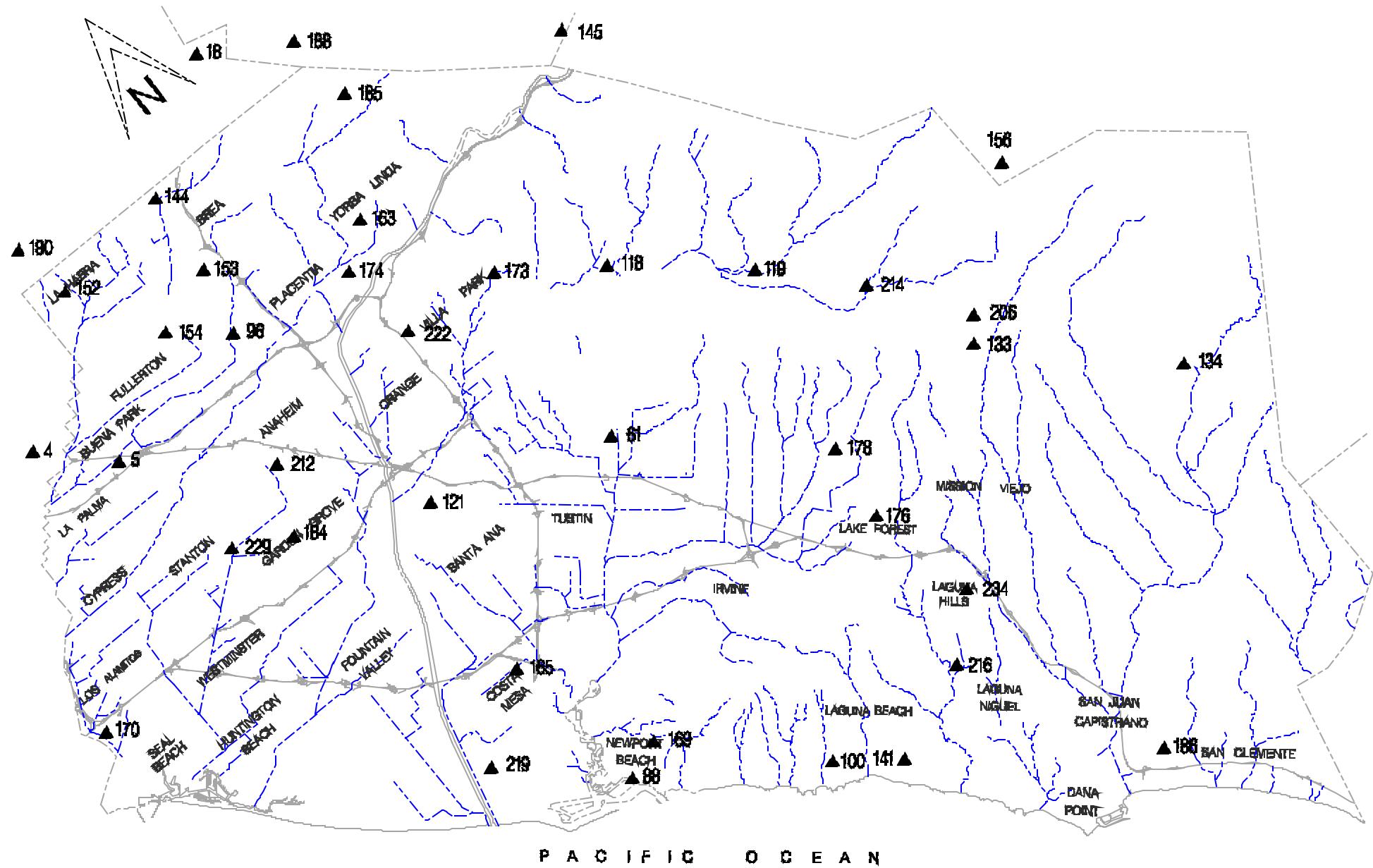


Figure 3

ACTIVE ALERT STATIONS LOCATION MAP

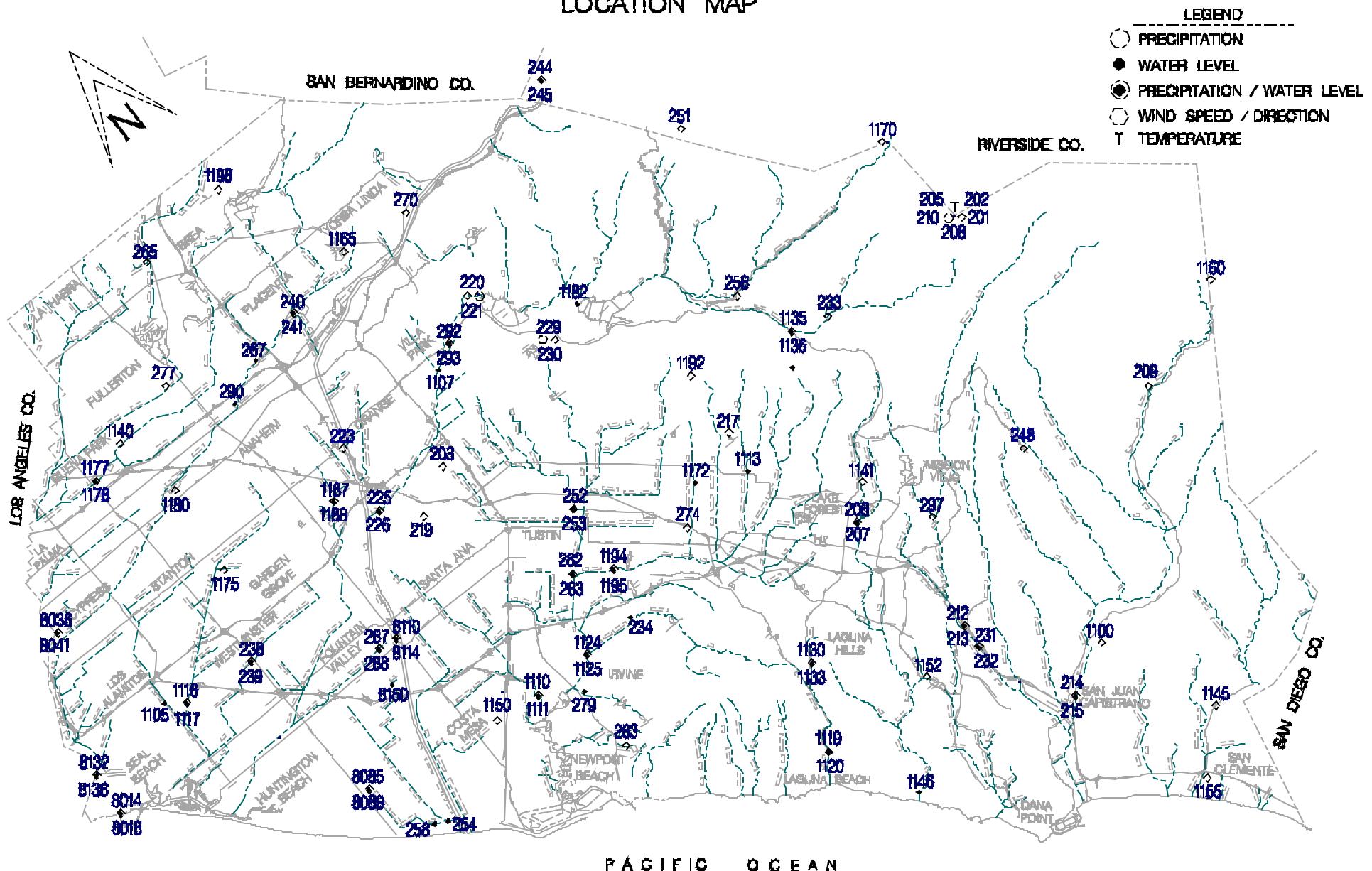


Figure 4
ALERT System
Telemetry Components

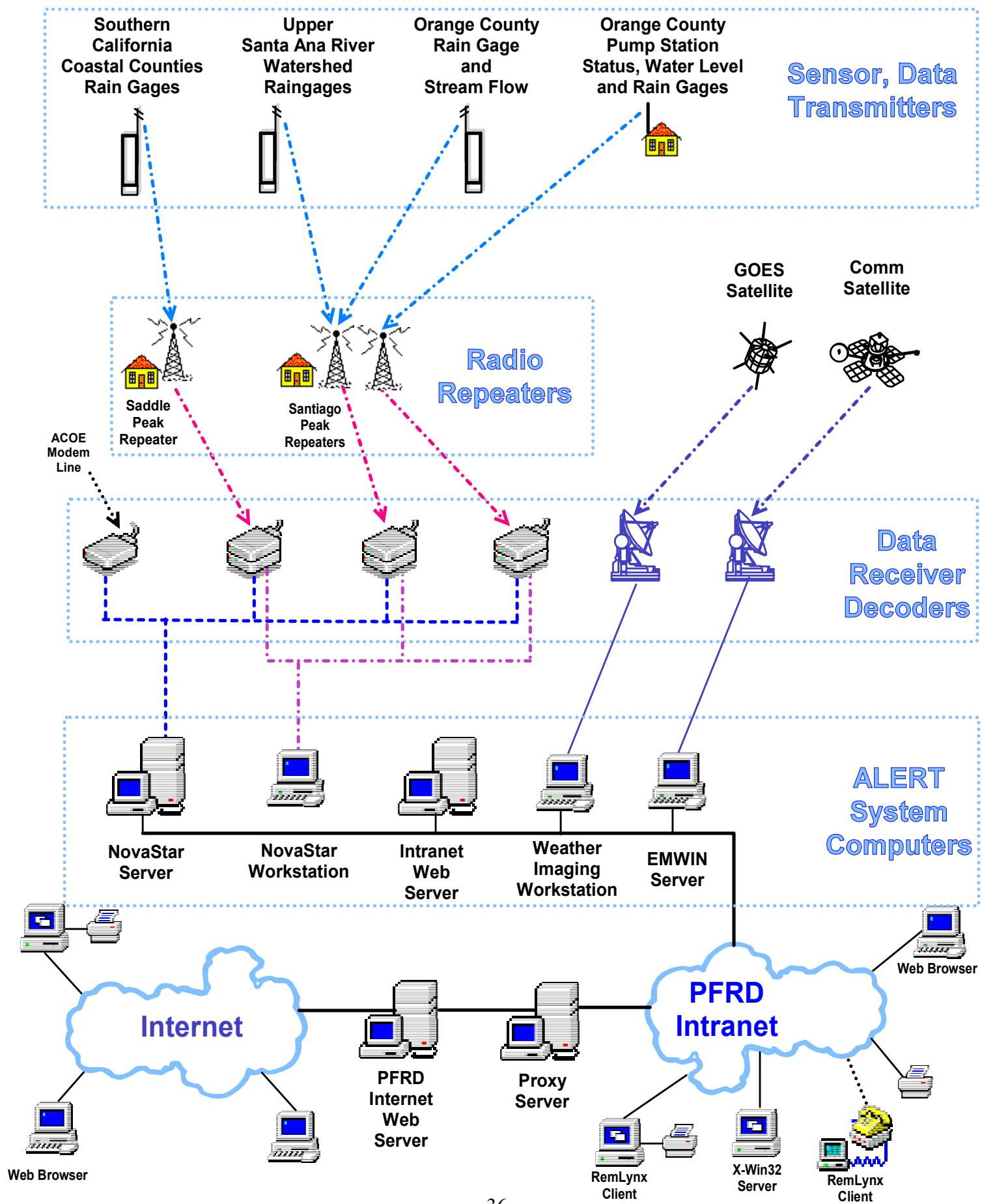
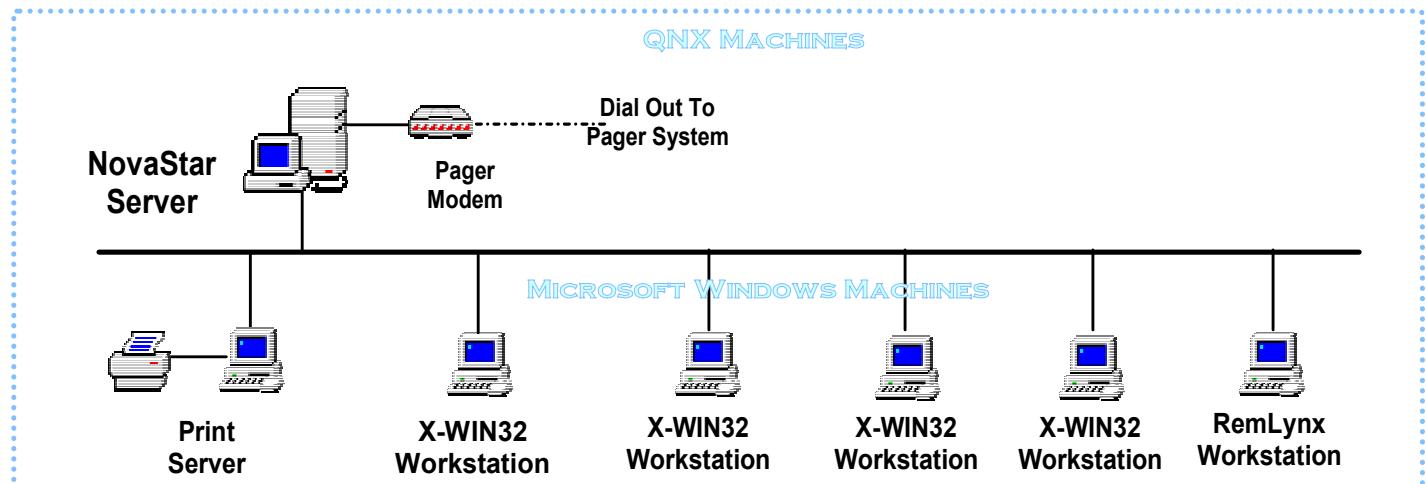
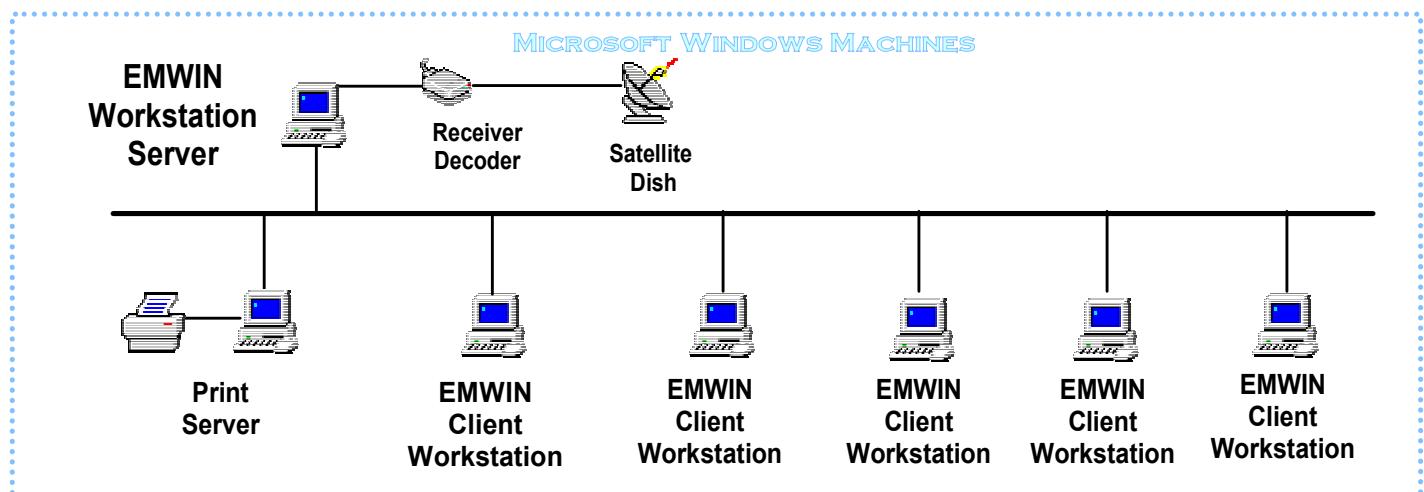


Figure 4 Continued

ALERT System Networked Computers



ALERT System Networked Computers



EMWIN System Networked Computers

Figure 5

SELECTED RAINFALL STATIONS
LOCATION MAP

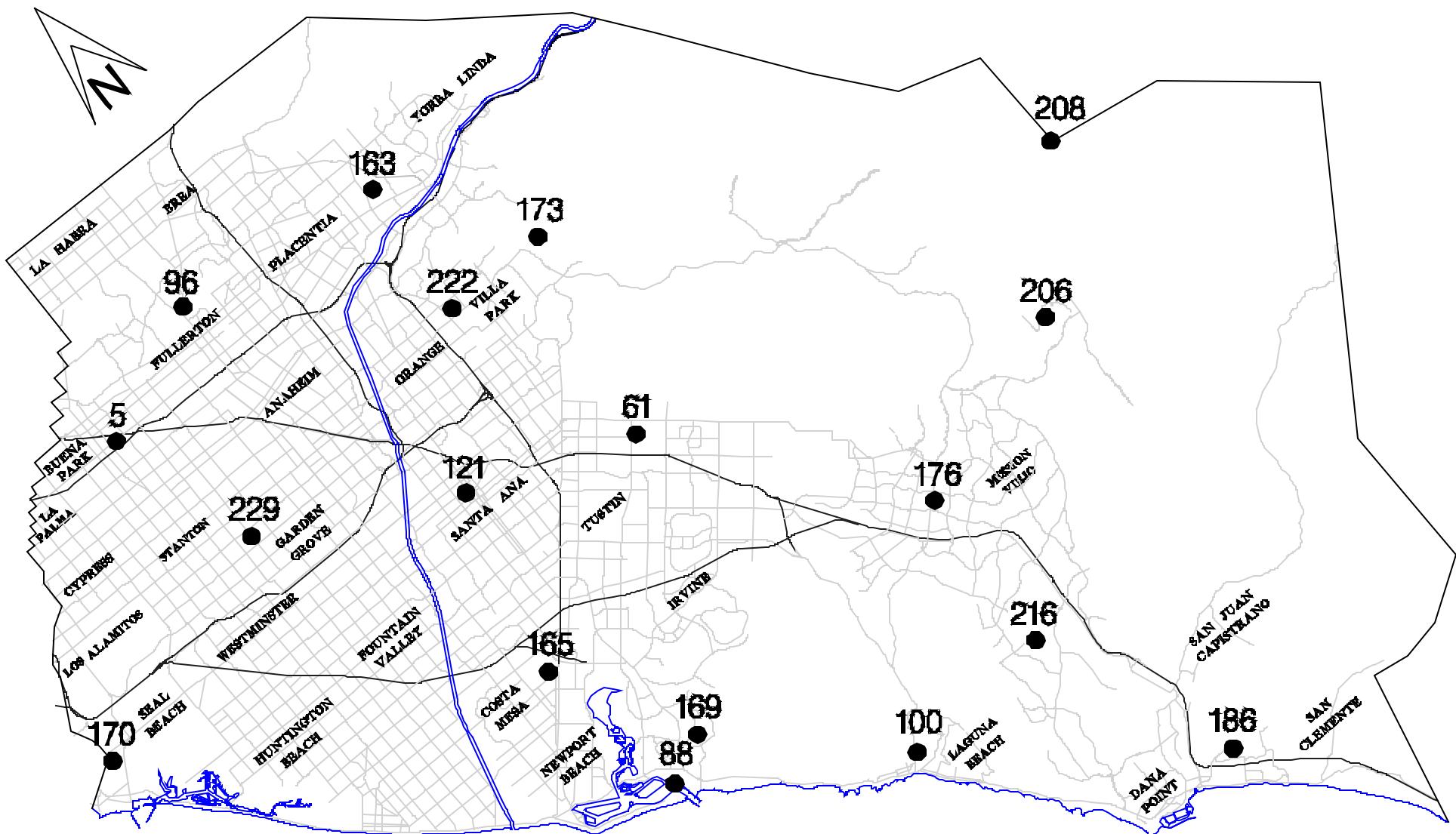


Figure 8

SELECTED RAINFALL STATIONS
SHORT - LONG TERM INTENSITY DATA
LOCATION MAP

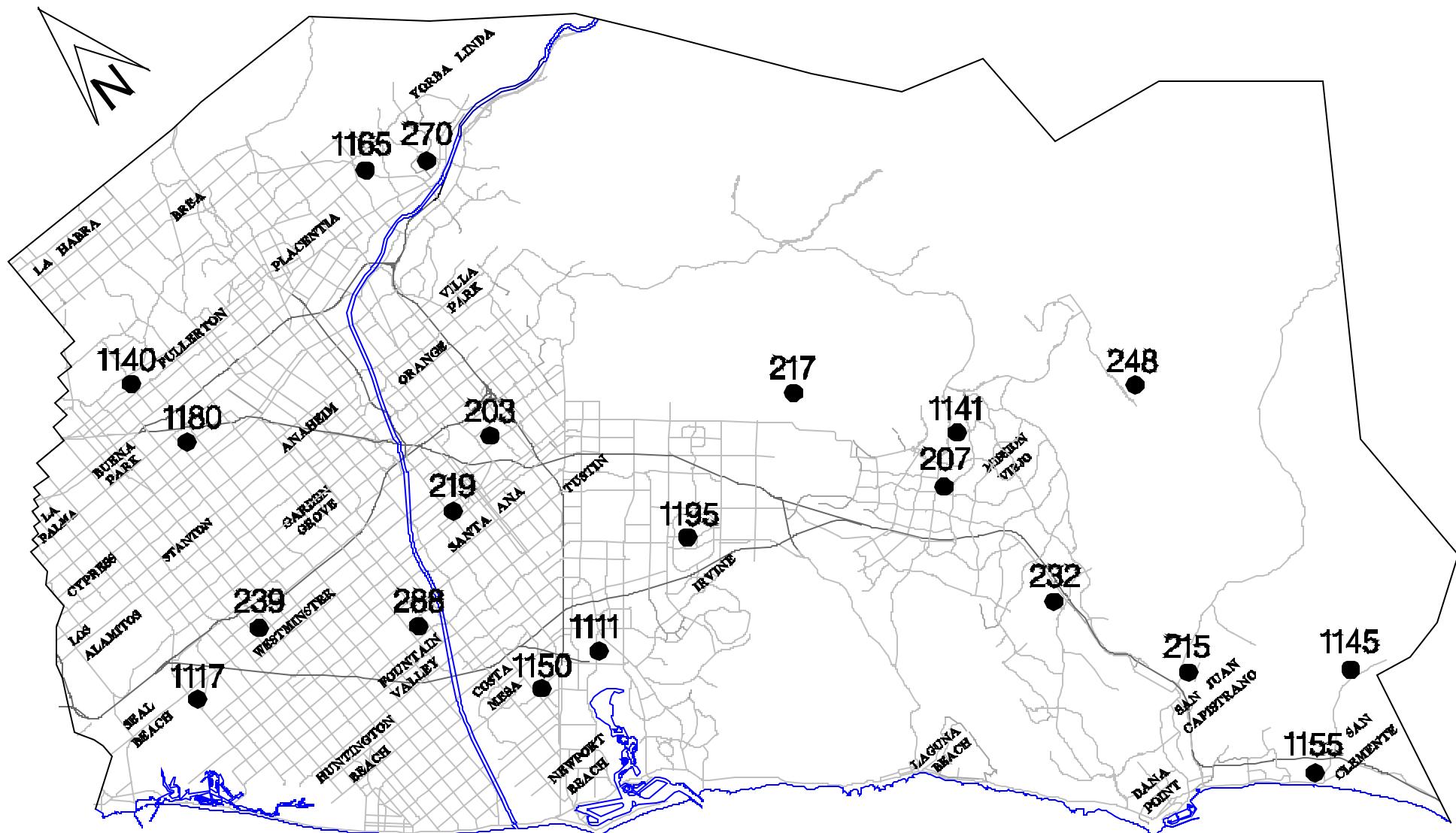
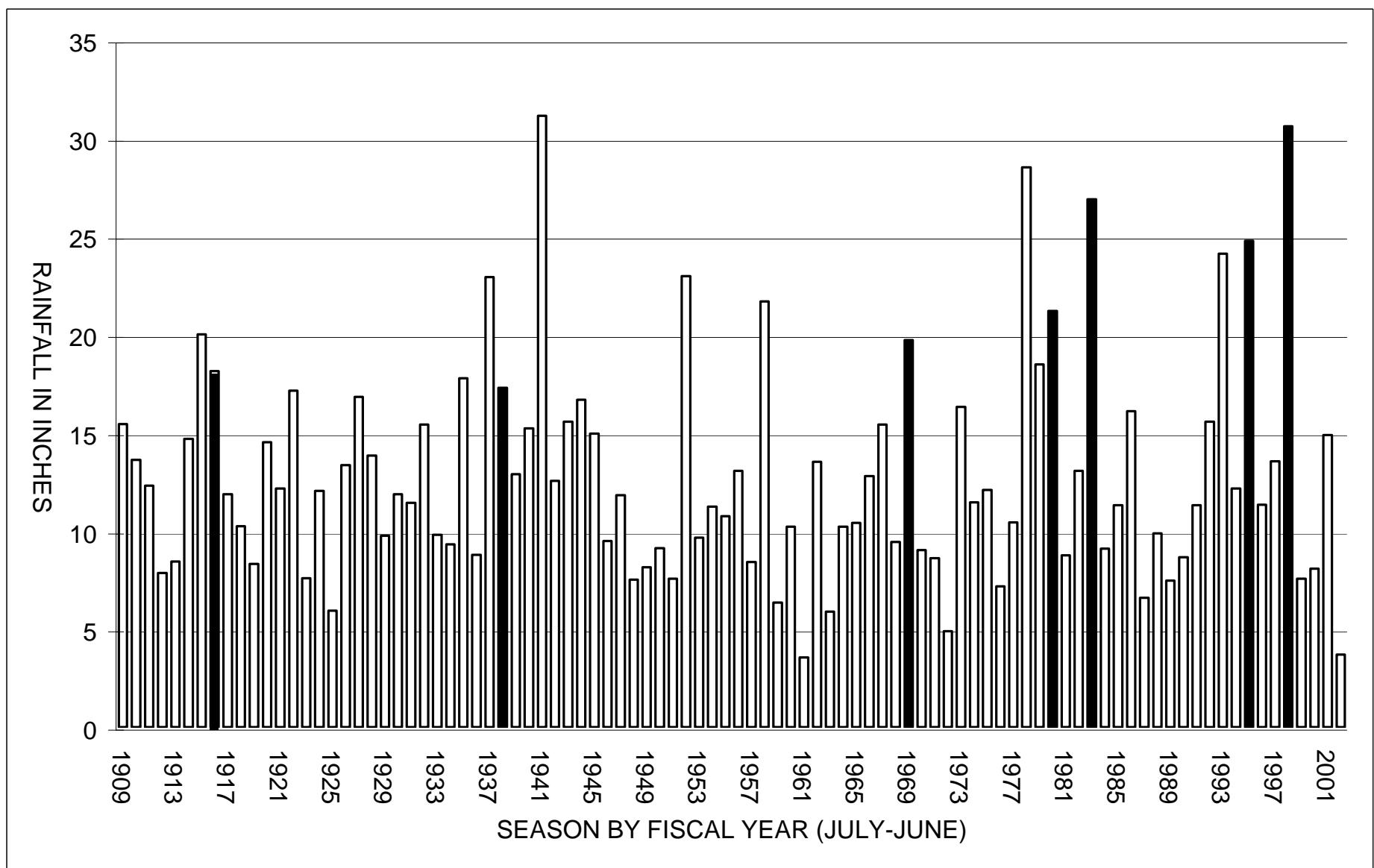


Figure 7
YEARLY RAINFALL TOTALS AND FLOOD YEARS *
SANTA ANA STATION 121
(1909-2002)



* Flood Year - Localized ponding and/or overtopping of flood control facilities. Note: Not an official Agency designation.

Figure 8
ISOHYETAL MAP
2001-2002

Lines of Equal Precipitation in Inches

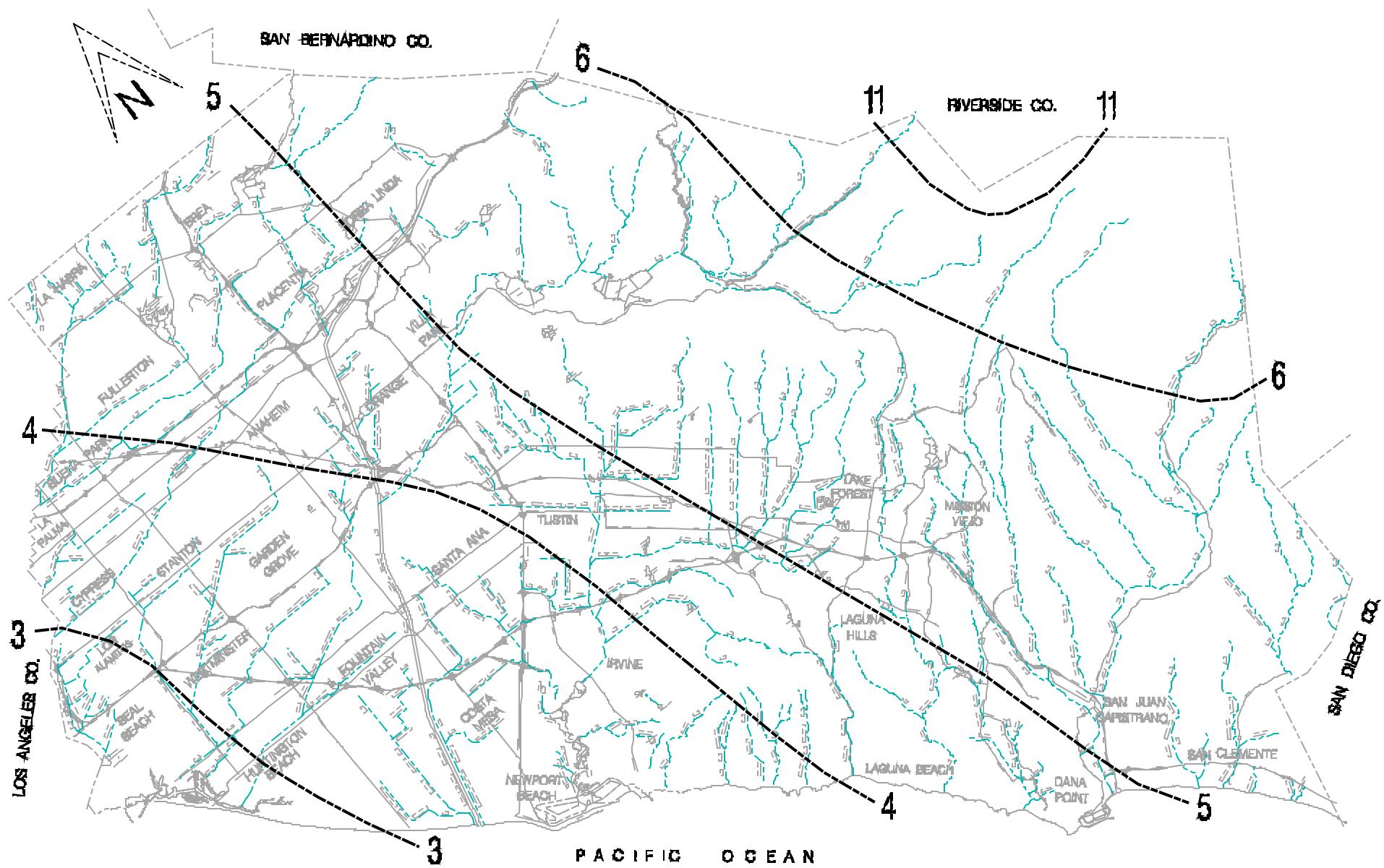


Figure 9
ISOHYETAL MAP - 40 YEAR MEAN
1963-2002
Lines of Equal Precipitation in Inches

